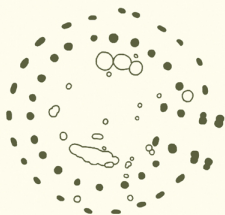
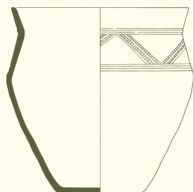


The **Earlier** Iron Age

in Britain

and the near Continent

edited by
Colin Haselgrove
and
Rachel Pope



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CONTINENT

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Contents

1. Characterising the Earlier Iron Age
Colin Haselgrove and Rachel Pope
2. The character of Late Bronze Age settlement in southern Britain
Joanna Brück
3. 800 BC, The Great Divide
Stuart Needham
4. Llyn Fawr metalwork in Britain: a review
Brendan O'Connor
5. Intensification of animal husbandry in the Late Bronze Age? The contribution of sheep and pigs
Dale Serjeantson
6. After 'Celtic' fields: the social organisation of Iron Age agriculture
Richard Bradley and David Yates
7. Refiguring rights in the Early Iron Age landscapes of East Yorkshire
Melanie Giles
8. Pitted histories: early first millennium BC pit alignments in the central Welsh Marches
Andy Wigley
9. Environmental evidence from the Iron Age in north central Britain: putting archaeology in its place
Jacqueline P. Huntley
10. Simple tools for tough tasks or tough tools for simple tasks? Analysis and experiment in Iron Age flint utilisation

Jodie Humphrey

11. A bloodless past: the pacification of Early Iron Age Britain

Simon James

12. Building communities and creating identities in the first millennium BC

Niall Sharples

13. Deposits and doorways: patterns within the Iron Age settlement at Crick Covert Farm, Northamptonshire

Ann Woodward and Gwilym Hughes

14. Ritual and the roundhouse: a critique of recent ideas on the use of domestic space in later British prehistory

Rachel Pope

15. The character of Earlier Iron Age societies in Scotland

Ian Ralston and Patrick Ashmore

16. The Early Iron Age of the Peak District: re-reading the evidence

Bill Bevan

17. The Early to Later Iron Age transition in the Severn-Cotswolds: enclosing the household?

Tom Moore

18. The aesthetics of landscape on the Berkshire Downs

Chris Gosden and Gary Lock

19. Settlement in Kent from 1500 to 300 BC

Timothy Champion

20. The Atlantic West in the Early Iron Age

Jon C. Henderson

21. English and Danish Iron Ages – a comparison through houses, burials and hoards

M. L. S. Sørensen

22. Familiar landscapes with unfamiliar pasts? Bronze Age barrows and Iron Age communities in the southern

Netherlands

Fokke Gerritsen

23. The emergence of early Iron Age ‘chieftains’ graves’ in the southern Netherlands: reconsidering transformations in burial and depositional practices

David Fontijn and Harry Fokkens

24. Early La Tène burial practices and social (re)constructions in the Marne–Moselle region

Marian Diepeveen-Jansen

25. Boundaries and identity in Early Iron Age Europe

Peter S. Wells

26. Rethinking Earlier Iron Age settlement in the eastern Paris Basin

Colin Haselgrove

List of contributors

Characterising the Earlier Iron Age

Colin Haselgrove and Rachel Pope

Introduction

In many parts of Britain, the Earlier Iron Age has consistently managed to elude attention and is often characterised more by what it lacks than what it comprises: for Bronze Age studies it lacks bronze, whilst from the perspective of the Later Iron Age it lacks elaborate enclosure. Social and economic developments in the centuries when iron came into more general use are much less understood than those that occurred during the Later Bronze Age, or in the late first millennium BC. One reason for this is the notorious plateau in the radiocarbon calibration curve, which reduces the possibilities for fine-grained analysis of change outside the pottery 'rich' areas of southern and eastern England. Another is the nebulous nature of the Earlier Iron Age settlement record in many areas, which, coupled to the near total absence of mortuary data, has inhibited regional synthesis. The intellectual reaction in the later twentieth century against the Three Age System has also played a role, leading to an increased emphasis on the continuities apparent across the Bronze Age–Iron Age transition at the expense of any changes that took place.

All this, of course, stands in contrast to the Earlier Iron Age in mainland Europe, with its wealth of burial evidence and exotic, Mediterranean links, apparently indicative of cycles of political and economic expansion and devolution. Consequently, archaeologists have not been shy to attempt ambitious social reconstruction and synthesis (e.g. Frankenstein and Rowlands 1978; Brun 1987; Kristiansen 1998). For many years, the main problem on the Continent was a dearth of settlement evidence to balance the funerary data, other than in the periods when fortified sites were in

vogue. Since the late 1990s, however, perspectives have begun to change on both sides of the Channel. Recent adjustments in absolute dating – ending the Ewart Park phase of the British Late Bronze Age metalwork industries in the ninth century BC (Needham *et al.* 1997) and starting Hallstatt C in mainland Europe around c. 800 BC (Pare 1999) – only serve to emphasise the archaeological void created in many areas of north-west Europe by the cessation of large-scale bronze hoarding and abandonment of certain other long-lived practices and site types.¹ At the same time, the explosion of developer-funded archaeology in Britain and its neighbours has unearthed a significant amount of new settlement evidence, filling in many of the gaps and complementing the burials that previously dominated the continental record. Although much of this material remains unpublished outside the grey literature, it amply confirms the diversity of Earlier Iron Age societies across Europe, whilst clarifying some of the wider patterns that existed. Above all, it is clear that in Britain, as in mainland Europe, the period was one of important social and cultural changes, some of them rapid and far-reaching, others gradual or regionally specific, which we have yet to characterise adequately, let alone explain (Haselgrove *et al.* 2001).

The present book has its origins in a seminar held in December 2001, at the University of Durham, to review the Earlier Iron Age in Britain in the light of these developments – and at the same time to set the insular evidence for the period c. 800–300 BC in a wider chronological and geographical perspective by inviting papers on the Late Bronze Age and from scholars working on mainland Europe and the Atlantic fringes. A number of contributions have since been added to address other topics (Brück; Huntley; James; O'Connor) and especially to enhance coverage of northern France and the Low Countries (Diepeveen-Jansen; Fontijn and Fokkens; Haselgrove). It is, after all, within a contact zone embracing south-east England, north-east France, and the Low Countries that current opinion locates the origins of the earliest types of Hallstatt C sword – the object that more than any other symbolises the onset of the Iron Age in western and central Europe (e.g. Milcent 2004). One of the regrettable features of research in the last 30 years has been that whilst British scholars approaching the Bronze Age to Iron Age

transition from a Bronze Age perspective have stressed the continued close links between Britain and Europe at this time (e.g. O'Connor 1980), their Iron Age counterparts have been prone to focus on features that set Britain apart, hindering the development of what ought to be – and, in previous generations, was – a productive dialogue with continental colleagues.

The papers in the book seek to establish what we now know (and do not know) about Earlier Iron Age societies in Britain and the near Continent, making use of a wide range of approaches, and presenting both detailed regional interpretations and broader narratives of change. In this introduction, we will examine to what degree a consensus of opinion is apparent with regard to three themes that have dominated recent research: (1) how the Late Bronze Age social system was transformed into one of the Later Iron Age; (2) the character of everyday activities and social organisation, as expressed in the settlement and material culture evidence, including the influence of changes in climate on farming strategies; and (3) the character of Earlier Iron Age societies in other regions of north-west Europe, where the archaeological sequences, at least at face value, seem quite different. We must, however, first find and define the Earlier Iron Age in Britain, and will conclude our contribution by signalling some additional issues on which, in our opinion, more research is required.

Defining the British Earlier Iron Age

Up until 1930, the continental Hallstatt-La Tène chronology was the only established framework available to British scholars seeking to accommodate the early material yielded by the excavations at Hengistbury Head (Bushe-Fox 1915) and All Cannings Cross (Cunnington 1923). Following the theoretical mood of the time, parallels were sought across the Channel and then interpreted as evidence for the arrival in Britain of migrants displaced by population movements in other parts of mainland Europe. By the time a second edition of the British Museum *Guide to Early Iron Age Antiquities* was published (Smith 1925), a general consensus had been reached, whereby waves of Late Urnfield settlers introduced Hallstatt culture to Britain during the earlier first millennium BC (e.g. Crawford 1922; Peake 1922), followed by a further, this time

La Tène, invasion around 300 BC. The new museum guide also abandoned 'Late Celtic' as a label for the period, opting instead for the term 'Early Iron Age',² already used by Maud Cunnington (1923) in her report on the emblematic site of All Cannings Cross.³

It was left to Christopher Hawkes to draw together the finds from All Cannings Cross, Hengistbury, and other sites like Eastbourne, Park Brow and Scarborough (Budgen 1922; Smith 1927; 1928) and formally define a British Hallstatt horizon, which he did in his essay 'The earliest Iron Age culture of Britain', which included a list of habitation sites where such pottery had been found (Hawkes 1930). Recognising that the growing complexity of the insular evidence warranted its own nomenclature distinct from the continental terminology, Hawkes followed this up with his famous 'Hillforts' paper, which identified three successive 'immigrant cultures', using Crawford's (1922) methodology, with pottery types as evidence for migration (Hawkes 1931). His 'Iron Age A' originated in the sixth century BC, when a series of Late Hallstatt groups – the last of them ejected from France by bearers of the new La Tène culture – settled in southern and eastern England, and introduced iron to Britain. 'Iron Age B' followed in the fourth and third centuries BC, when new invasions took place in south-west England and East Yorkshire, eventually spreading La Tène culture to the rest of Britain (where Late Bronze Age societies had 'lingered on').⁴ There followed a rash of excavations on Iron Age sites between the 1930s and 1950s, and the basic scheme became prone to regional and chronological elaboration, as for example by Wheeler (1935) and Kenyon (1952).

Hawkes (1959) responded to these elaborations with his developed ABC model. This divided southern Britain into provinces and regions, and proposed a chronology independent of the cultural labels (Fig. 1). Llyn Fawr metalwork was introduced by 'Hallstatt adventurers' (*ibid.*, 177) in the latter part of 'Late Bronze Age 2' (c. 750–550 BC). 'Iron 1' followed from c. 550–350 BC, subdivided into Phase 1a (c. 550–420 BC), the 'Hallstatt colonising era', and Phase 1b (c. 420–350 BC), which saw a limited amount of new immigration into the upper Thames valley, where the settlers introduced La Tène pottery forms. Hawkes remarked that the most common subdivision of his 1931 scheme was for Iron Age A. It is interesting that he ended 'Iron 1' around 350 BC, roughly where we

would now put the transition between the Earlier and Later Iron Age. In the 1960s, Hawkes' system of provinces and regions was extended both to Scotland (Piggott 1966), where it has proved notably resilient (cf. Harding 2004), and the Irish Sea province (Alcock 1972).

[illegible]

Fig. 1. Hawkes' (1959) chronology for the Early Iron Age.

The way was left open for a new phase in the definition of the Earlier Iron Age, this time with the help of radiocarbon dating, which has helped dispel the idea that cultural developments in

Britain lagged behind continental Europe. The format of the first edition of *Iron Age Communities in Britain* effectively followed Hodson's model, with the period 750–100 BC essentially treated as a continuum during which (non-hierarchical) Iron Age societies changed only very gradually (Cunliffe 1974a, 303–306). In a shorter study published in the same year (Cunliffe 1974b), a somewhat different emphasis is apparent: the period from 750–500 BC is seen as a 'phase of innovation' following the 'conservatism' of the Late Bronze Age, with the appearance of hilltop enclosures, new metalwork and ceramics, whilst that from 500 BC– c. AD 43 is a 'phase of development'; after c. 350 BC, however, contact with mainland Europe subsided in favour of strong localised traditions, only resuming in the first century BC. Throughout the 1960s and 1970s, archaeologists attempting to make sense of the earlier first millennium BC continued to wrestle with the problems created when the Deverel-Rimbury culture was re-dated to the later second millennium BC (Smith 1959). Not until 1980 was the study of the Later Bronze Age pottery and settlement record put back on a firm footing (Barrett 1980; Barrett and Bradley 1980).

Using the new evidence provided by the Danebury pottery sequence, Cunliffe (1984) developed a more detailed chronology for Wessex, dividing the Earlier Iron Age into 'Earliest' (c. 800–550 BC) and 'Early' (c. 550– 400 BC) phases.⁵ This framework was then adopted for more general use in the third edition of *Iron Age Communities* (Cunliffe 1991), albeit with caveats about not trying to employ these divisions in areas where pottery evidence was lacking. Some doubts were expressed about using the ceramic sequence to define the beginning of the Iron Age, rather than changes in the metalwork, as these were evidently out of step (cf. Hill 1995a), but with the back-dating of the Hallstatt C horizon on both sides of the Channel (Needham *et al.* 1997; Pare 1999), this ceases to be an issue. If anything, there is now more uncertainty over where the transition to the Later Iron Age should be placed; in most parts of Britain, major changes in the settlement evidence are apparent from perhaps as early as 400 BC, whereas based on the pottery evidence, a date closer to 300 BC seems more appropriate (Cunliffe 2005).⁶

The 1990s saw two attempts at characterising the *Earliest Iron Age* using the new information generated by fieldwork over the previous

two decades. For Cunliffe (1995a), the principal changes in Wessex in the eighth to seventh centuries BC were the building of linear earthworks and new forms of large hilltop enclosure, the abandonment of many existing field systems, and the appearance of elaborately decorated pottery, seen as evidence for a desire to bring the productive capacity of the land under tighter control, but also of widespread interaction. Publication of the Danebury Environs Programme has since provided further insights into the nature of the economic and social changes taking place in Wessex at this time (e.g. Cunliffe 2000; 2004; 2005). The excavated evidence from western and northern Britain was – and still is – much sparser. In north-eastern Britain, dispersed Late Bronze Age upland settlement changed to palisaded enclosures in the seventh century BC, whilst in Atlantic Scotland substantial stone roundhouses appeared between c. 750–500 BC (Cunliffe 1995a).

J.D. Hill (1995a) offers a somewhat different perspective on the period. His *Earliest Iron Age* focuses on the break in bronze metalwork deposition and the origins of Llyn Fawr, the continuity of domestic ritual traditions, the cessation of ringworks, and the appearance of ‘midden sites’ and large roundhouses in Wessex. Hill sees the origins of hilltop enclosures as early as 1000 BC, with a flourish in Wessex c. 650–500 BC. He reviews the conflicting evidence for general continuity in settlement forms alongside dramatic changes in metalwork deposition. Finding it hard to reconcile them, he concluded that they must represent ‘contradictory alternative social discourses’.

None of the recent reviews of the Scottish Iron Age (e.g. Hingley 1992; Armit and Ralston 1997; Harding 2004) have attempted to define an equivalent early horizon, opting instead to discuss the period more generally, although the lack of knowledge is occasionally stressed.⁷ Starting dates suggested for the period vary from 700 BC to around the mid first millennium BC, reflecting a continuing ambivalence to the classification and significance of the various finds of Hallstatt metalwork north of the border (cf. Ralston and Ashmore). A recent account of Welsh later prehistory does make some attempt to characterise the earliest developments, especially regarding hilltop enclosures and metalwork, but only begins the Iron Age at c. 550 BC (Davies and Lynch 2000). In

Ireland, the tendency to retain the concept of the 'Celtic Iron Age' and the difficulty of positively identifying earlier material mean that our understanding is generally limited to the Later Iron Age (e.g. Harbison 1988; O'Kelly 1989; Waddell 1998). Nothing has come to light to modify the view expressed by Champion (1989, 291–2), reviewing the Bronze Age to Iron Age transition in Ireland, that the Irish Late Bronze Age industry did not continue later than the Llyn Fawr phase in Britain, and it would be a mistake to place too much significance on the ensuing lack of Hallstatt D metalwork, or of counterparts to the early La Tène daggers from the Thames valley (Raftery 1994), as this is also true for much of Britain.

It is noteworthy that none of the three edited volumes published in the late 1990s propounding new approaches to the Iron Age address the Earlier Iron Age in its own right (Champion and Collis 1996; Gwilt and Haselgrove 1997; Bevan 1999). However, in a postscript to one of them, Haselgrove (1999) drew attention to two key problems with Iron Age studies: a lack of attention to developments outside southern England and a neglect of the Earlier Iron Age. He commented that Iron Age studies were particularly concerned with the topics of power, domination, competition and status, with explanations for the Late Bronze Age–Earliest Iron Age transition still essentially systemic. The recent agenda for the British Iron Age (Haselgrove *et al.* 2001) again stresses our lack of knowledge beyond southern England and the tendency – often unconscious – to focus on the period after c. 300 BC. Consequently, the Earlier Iron Age – and its transition periods – was named as a high research priority. The hypothesis at this point was for continuity across the Late Bronze Age–Earlier Iron Age transition and real difference over the Earlier Iron Age– Later Iron Age transition.

Over time we have seen a gradual backward extension of the start date for the Earlier Iron Age. With the re-dating of Ewart Park metalwork (Needham *et al.* 1997), this has happened once more. A majority of British archaeologists now set the transition between the Bronze Age and the Iron Age at c. 800 BC, coeval with the start of Hallstatt C on the Continent (e.g. Pare 1999; Haselgrove *et al.* 2001; Cunliffe 2005), although others continue to regard the Llyn Fawr phase as the final Bronze Age, following the continuation of bronze

hoarding in the period c. 800–600 BC (e.g. Brück, O'Connor). The switch in metals is further discussed below, but there is a growing consensus that iron was more significant in the Llyn Fawr phase than its incidence in the archaeological record implies, probably supplanting bronze for everyday use quite early in the period, with bronze only being retained for an increasingly specialised range of often symbolically charged objects like Gündlingen swords and the nonfunctional Armorican axes (Thomas 1989; Needham 1996, 136).⁸ This, in turn, implies that ironworking was already gaining hold in the later stages of the Ewart Part phase (cf. Needham 1990, 130–40; 1996), a view which not only accords with the marked upsurge in iron objects in mainland Europe at the same period (see Brun 1986, 70), but is also looking increasingly plausible following the discovery of apparently incontrovertible evidence of Ewart Park ironworking at Hartshill Quarry in Berkshire (Collard 2005).⁹

Only five years ago, the emphasis was still primarily on continuity across the Bronze Age to Iron Age transition, but the view espoused by many of the contributors to this book is that the period around 800 BC saw a fundamental transformation in the character of later prehistoric societies in Britain, witnessed across numerous different categories of evidence in lowland Britain (Needham) and confirmed for north and central Britain by dramatic changes in the domestic evidence (Pope 2003a). The relevant changes in the material record and the introduction of what Needham terms a new ‘basic value system’ are further discussed below. At the other end of the period, the transition to the Later Iron Age can, as we have seen, be placed somewhere between 400–300 BC, although here there is still scope for discussion. In short, where the Earlier Iron Age was once seen as a relatively brief period of time and easily marginalized because it lacked the visibility of the Later Iron Age, it now spans some five centuries, and can no longer remain uncharacterised.¹⁰

Finding Earlier Iron Age settlement

One problem in characterising the period is the low volume, or even absence, of identifiable Earlier Iron Age sites outside the ‘hillfort-dominated zone’ (Cunliffe 2005, fig. 21.6) – and often of non-hillfort settlement within it – despite the increase in archaeological

sites found by developer-funded archaeology since the advent of PPG16 (e.g. Champion; Henderson; Moore) and its success in filling in some blanks in the Earlier Iron Age settlement map, as in West Yorkshire (e.g. Roberts *et al.* 2001). These difficulties are not confined to settlement data: for example, O'Connor notes an absence of Llyn Fawr hoards in the counties bordering the Thames estuary and in the Midlands. In a few areas, such as north-west England, the lack of later prehistoric settlement evidence is more general (cf. Haselgrove *et al.* 2001; Pope 2003a; Cunliffe 2005), but the normal picture seems to be far fewer Earlier Iron Age sites compared to the preceding and following periods, as for instance in Devon (Fitzpatrick *et al.* 1999), or the East Midlands (Willis 2006). Unless the history of research or problems of detection specifically suggest otherwise, the implication is that substantial areas were minimally inhabited in the Earlier Iron Age, and in some cases beyond.

It is possible that, in some regions, we are not finding Earlier Iron Age settlement because it was restricted to specific landscape contexts. A common suggestion is that a preference for valley bottoms means that unenclosed sites escape detection via aerial and geophysical survey because of the depth of hillwash, with unenclosed post-built structures only found as a result of large-scale stripping operations (e.g. Moore). Alternatively, the heavy nature of the soils, coupled with the fact that iron ard tips are not found until the Later Iron Age, might mean that many valley landscapes were only used to a limited extent in the Earlier Iron Age. Only continuing regional investigations will resolve this matter. Other evidence may be eluding us due to its ephemeral nature. For example, re-assessment of structural evidence from Moel y Gaer points to the use of organic walling there, and it is entirely possible that turf and clay-walled structures were used extensively in the seasonal exploitation of upland riverine landscapes (Pope 2003a).

The idea that most Earlier Iron Age settlements apart from hillforts were unenclosed and often lacked substantial features – thereby hindering their detection – may hold for some regions, but is not the case everywhere. In Wessex, for example, a variety of nonhillfort enclosures were in use during the Earlier Iron Age (Cunliffe 2000; 2004; Sharples this volume). Even in regions where

unenclosed settlement has been thought to predominate throughout the first millennium BC, such as eastern Scotland north of the Firth of Forth, it is clear that enclosures – even if delimited only with a palisade – were a component in the overall Iron Age settlement pattern and that at least some of these sites were occupied in the Earlier Iron Age (Davies 2007). Nor is an emphasis on unenclosed settlement apparent in broader-scale analysis of later prehistoric sites in north and central Britain, where Pope's (2003a) study revealed that more than one in two Earlier Iron Age sites are enclosed, although how representative this ratio is of the original situation remains a matter of some debate.¹¹

The point also needs to be reiterated that however similar sites may appear at a superficial level – be they enclosures or hillforts – their individual biographies often turn out to be quite different, as with the three Ridgeway hillforts studied by Gosden and Lock.

Some papers suggest that the problem of the 'invisible' Earlier Iron Age is inherent within our own systems of classification. Henderson highlights problems with RCAHMS terminology for houses in Atlantic Scotland, with liberal application of the category 'dun' – a thick-walled, apparently late type – masking potentially earlier origins. In addition, it has not yet been clarified whether apparently substantial structures sometimes in fact represent a series of rebuilds of an earlier, simple form. In Cornwall, the use of the term 'round' may similarly hinder the identification of earlier settlement types. A further problem in many areas is the widespread lack of diagnostic material culture for the Earlier Iron Age (Henderson; Bevan). Have we as a result been 'dating' our Earlier Iron Age structures to earlier or later periods? Almost two in three Earlier Iron Age sites in central and northern Britain were excavated since 1970 (Pope 2003a), implying that the advent of radiocarbon dating has had a significant impact on the identification of Earlier Iron Age settlement, although further refining the chronology is difficult when most of our absolute dates span the entire period due to the plateau in the calibration curve.

The case for an invisible Earlier Iron Age has, however, been over-stated. In their comprehensive audit of the Scottish radiocarbon dates, Ralston and Ashmore stress that, if only well-dated sites are considered, it is not valid statistically to conclude

that there were in fact fewer Earlier Iron Age sites than in the previous or succeeding periods – whatever the raw numbers might seem to indicate. Similarly, Pope's (2003a) survey of north and central Britain found that almost one in four Iron Age sites was inhabited in the Earlier Iron Age,¹²

whilst a glance at the distribution of Earlier Iron Age pottery styles in southern Britain (Cunliffe 2005, figs. 5.3–5.4) confirms that there is no shortage of occupation sites there, although in both zones the spread of evidence is far from even. As we have noted, some apparent blanks may well prove to be enduring, although many are probably a product of the history of research.

In our current, limited state of knowledge, it is certainly not out of the question that the observed variable densities of Earlier Iron Age settlement genuinely reflect demographic trends, spatial and temporal. Pope (2003a) has suggested elsewhere that the Earlier Iron Age might have witnessed lower populations in parts of Britain following the – currently under-estimated – impact on subsistence strategies of a sustained period of climatic decline. This contrasts strongly with the Later Iron Age, where changes in land tenure have been linked to rising population (Haselgrove 1999; Moore). We tend to assume that population growth in prehistory was regular and continuous, but this fails to acknowledge the fact that fluctuations in population were common in the historic period as a result of episodes of famine or disease. We must continue to keep an open mind on the matter, despite the critical response to the work of Burgess (1985).

People in transition

The Late Bronze Age to Earlier Iron Age transition

Brück's paper on Late Bronze Age settlement sets the scene for Needham's discussion of the transition to the Iron Age in lowland Britain. Much of Needham's work focuses on the 'continuity or change' question. Despite the recent emphasis on the former, we need to rethink our ideas following the re-dating of the transition to c. 800 BC. Previous models of iron 'undermining' bronze or of a 'bronze crisis' can be rejected. So too can the idea of a steady transition between the two periods, which does not account for the

rapid deposition of bronze and the apparently relatively low iron stocks for the first few centuries of the Iron Age. Needham suggests that the 'social value system' based on bronze hit a downward spiral until it became devalued; a resulting disenchantment with bronze then led to the promotion of other modes of social articulation and the forging of a new value system. Sharples sees the transition as signalling the collapse of gift exchange in the elite sphere of long-distance exchange networks. Needham suggests that a 'whirlwind of change' was already underway prior to the abandonment of bronze.

Rather than a simple change from bronze to iron technology, Needham stresses the changing *social* role of metal and argues that iron was but one factor in the transition to the Iron Age. Like Cunliffe (1991; 2004), Needham considers that there was a distinct horizon between Late Bronze Age Plainware and Decorated wares (*contra* Barrett 1980), with a rapid expansion both in the range of ceramic forms and also in quantity. He suggests that with the redundancy of bronze and cessation of the 'mature' Ewart phase of mass deposition at the end of the ninth century BC, ceramics became a new vehicle for displaying identity. In Wessex, the introduction of Decorated wares was associated with the new category of 'middens' sites, which see much evidence for communal feasting in the Earliest Iron Age. Over large areas of southern England, the landscape was extensively reorganised, with many field systems apparently abandoned, although a degree of caution is required: prehistoric farming did not always require boundaries that can be recovered archaeologically (Bradley and Yates) and some existing boundaries may have retained their meaning (Moore).

A degree of continuity is also apparent between the two periods, especially in the settlement evidence (Brück). In addition, we can see Bronze Age origins to features that would come to characterise the Earlier Iron Age in various parts of southern and eastern England, such as shifting, open settlements (Sharples; Brück; Moore) and large houses (Sharples 1998). Both Brück and Moore argue for the origins of early hilltop enclosures in the Late Bronze Age, a widely accepted suggestion, but contested by Needham for lowland Britain.¹³ Ringworks functioned across the transition but their appearance late in the Late Bronze Age moves Needham to suggest that they are better seen as *part* of the phenomenon of transition.

Bradley and Yates comment that the Bronze Age custom of constructing pit alignments tends to continue into the Earlier Iron Age, a trend apparent in the upper Thames valley, the Severn–Cotswolds and the Welsh Marches (Moore; Wigley). In addition, Brück argues for a continued tradition of ‘conspicuous consumption’ in the Earliest Iron Age, albeit in an altered form, with the accumulation of midden mounds as ‘visible evidence of excess’ and potentially also through the destruction of houses on abandonment.

In north and central Britain, there seem to have been significant changes in subsistence strategies around 800 BC, with an apparent increase in cattle-based pastoralism and many settlements shifting to lower locations: three-quarters of structures belonging to the transition period are located at or below 100 m above sea level, a shift from around one third in the Late Bronze Age (Pope 2003a). This complements a loss of evidence for textile production and continued decline in apparently seasonal structures. The dominance of Brück’s (1999) single-generation model in the first millennium BC of north and central Britain might imply the regular shifting of largely cattle-based pastoralist communities seeking new land for grazing (Pope 2003a). As in southern Britain, there was a dramatic increase in the size of domestic structures; this might suggest an increase in household/livestock numbers, but could be seen as the introduction of the practice of over-wintering cattle. In addition, the return to popularity of the cooking pit over other hearth types suggests an increasingly meat-based diet (*ibid.*). There was also a decline in local arable production alongside a rapid increase in evidence for local storage, which might suggest more communal production methods.

At the transition, there was also a dramatic fall in the number of houses being rebuilt in favour of houses being repaired (Pope 2003a), which might be taken as indicating a period of low population/resources (cf. Cameron 1991). At the same time, amongst the relatively few structures that *were* rebuilt, there is an increased incidence of multiple rebuilds, which could be interpreted in terms of a greater emphasis on lineage within these communities (R. Hingley pers. comm.). Alternatively, it may represent the increasingly episodic use of seasonal structures. Greater house size – along with evidence for increased storage – might imply a return to

the more communal social forms from which insular societies seem to have moved away at the end of the Middle Bronze Age (Pope 2003a). The increase in cooking pits might also imply the formation of larger social groups, as this method of cooking is designed for feeding large groups of people (cf. Wandsnider 1997). Whilst this might be explained by a slight increase in population at this time, we could perhaps see this as evidence for the need to create social cohesion amongst collectives at c. 800 BC.

As Needham notes, we also need to reconsider the nature and timing of the changes in burial and ritual practices that took place in the early first millennium BC. Parker Pearson (1999) has argued for a shift in insular belief systems around 900 BC, but the evidence from north and central Britain supports Needham and others like Cunliffe (2004), who see major social changes closer to 800 BC. For a start, this is when roundhouse orientation is standardised to its greatest ever extent towards winter sunrise (Pope 2003a). There are, however, hints of earlier origins: for Needham, Late Bronze Age ringworks are where the concerns with eastern domestic orientation are first expressed. Equally, preliminary results suggest a dramatic increase in structured deposition in house contexts during the Late Bronze Age, falling off at the transition, and thus mirroring non-domestic deposition practices. Such activity may be inspired by changing belief systems at the beginning of the first millennium BC, perhaps linked to worsening climate and low food supplies in some areas (Pope 2003a). It is shortly after 800 BC that the entirely new practice of storing grain (presumably seed corn) underground in pits first appears, a development which Cunliffe (1992) has linked directly to the adoption of a new belief system and one which was to dominate the agricultural economy until very nearly the end of the Iron Age in many areas of southern Britain (and also northern France).

Developments during the Earlier Iron Age

There is general agreement that the key change at the start of the Earlier Iron Age in northern and western Britain was the move from display through the deposition and exchange of metalwork to display through domestic architecture (e.g. Henderson; Ralston and Ashmore). In lowland Britain, Needham also talks of the

‘ostentatious’ nature of architecture at the time of the Bronze Age to Iron Age transition, with the ‘home’ becoming a recognised arena for social competition for the first time. For him, however, there was also a shift towards the social impact of agricultural systems in structuring both intra- and inter-community relations. Like Cunliffe (2004), Needham comments on the much greater concern with foodstuffs apparent in the Earlier Iron Age, seen in the new focus on grain storage and increased evidence for salt working and therefore food preservation. He suggests that food surplus became an instrument of political manipulation for the first time. For Needham, the essence of the transition is the shift from (Bronze Age) control of exchange networks to (Iron Age) control over land and agricultural production. Redistribution may have taken place through communal feasting; he also suggests that craft production had an important role in an Earliest Iron Age system more complex than that of the Late Bronze Age (based as it had been on a single dominant medium). At the same time, people no longer invested so much labour in defining the limits of individual plots of farmland (Bradley and Yates). It was now what was produced that mattered. Not until well into the Later Iron Age do we again see extensive new field systems being laid out.

In north and central Britain, there is evidence for some return to the uplands in the course of the Earlier Iron Age (Pope 2003a), with possible occupation of this period at elevated sites like Dalrulzion (Maxwell 1967– 8), Erw-wen (Kelly 1988), and South Barrule (Gelling 1970). A rapid decline in structure size and the reintroduction of textile production implies the first increase in sheep husbandry since the Earlier Bronze Age. The evidence implies subtle shifts in farming strategy, with more mixed farming and smaller-scale, distinctly local arable production. A decline in community-based farming might be reflected in the decrease of grain storage facilities and the loss of household middens, apparently contrasting with southern Britain. The loss again of the cooking pit suggests a move away from methods of demonstrating community identity adopted at the time of the transition, as might the decrease in evidence for craftworking¹⁴ – in particular of metalworking. More elaborate enclosures were constructed, now with their entrances orientated towards east – in contrast with the

south-easterly emphasis at the start of the period – alongside a continuation of house-based display (Pope 2003a).

In the Earlier Iron Age, arenas of social competition appear generally more parochial. Henderson suggests that exchanges between the communities of the Atlantic west were more ‘inward-looking’ and conservative than they had been in the Late Bronze Age but insists that contacts did continue at some level, as witnessed by similarities in the settlement forms. In Wessex, craft production is seen as predominantly local and, whilst the Late Bronze Age and the Later Iron Age are both periods of visible weaponry, in particular swords, the Earlier Iron Age can be characterised as one of boundaries, although in other areas of Britain, responses to the collapse of the bronze exchange networks were quite different (Sharples). Thinking back to Henderson’s idea, we can take Sharples’ work as suggesting that, whilst the periods before and after were ones of exchange and of ‘open’ communities, the Earlier Iron Age was a period of competition, where groups were closed to new ideas. Sørensen characterises the Earlier Iron Age as a period with an ‘absence of innovations, impulses and dynamic change’.

Our traditional understanding of the Earlier Iron Age is that communities experienced social fragmentation after the collapse of bronze exchange networks (e.g. Bradley 1984). Sørensen sees this as bringing about variation in local and regional social forms. This is seen in the wider range of settlement types and different kinds of households in the Earlier Iron Age. She sees a lack of ‘distinct public spheres’ or constructed communal areas in the settlement record in Britain and Denmark as indicative of ‘traditional small-scale communities centred around the farmstead’, although going on to suggest that in both regions, these were affected by ‘pressure towards social agglomeration’ during the first millennium BC. Socially, it was perhaps more difficult to integrate British groups – with their roundhouses and enclosed space and fields systems – than the Danish societies with their self-contained longhouses. As such, the evidence for communal feasting in the Earliest Iron Age (Needham) may be seen as a necessary social mechanism to ensure the integration of larger social groups.

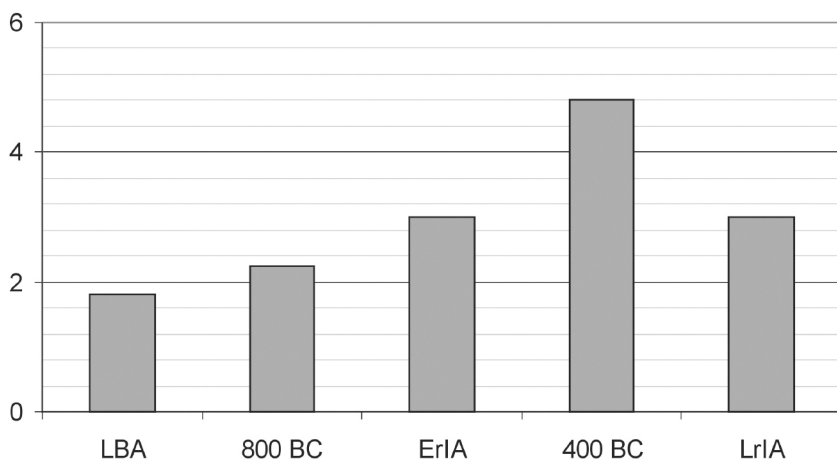
The transition to the Later Iron Age

A break in the settlement evidence occurs after 400 BC in many areas of Britain, which Moore suggests represents a relatively swift transition. Numerous studies reveal a much greater density and diversity of settlement in the later first millennium BC, with new site types and a move towards occupation of marginal, or less densely settled areas, such as wetlands (cf. Haselgrove 1989; 1999; Hill 1995a). This was not the case everywhere, however: in parts of Wessex, the number of occupied sites actually declined as developed hillforts became larger and more densely inhabited, amidst increasingly competitive consumption of labour and resources (Sharples), although around other hillforts, smaller farming settlements continued in use, as in the environs of St Catherine's Hill (Collis 2002). In north and central Britain, the Earlier to Late Iron Age transition is revealed as a period of continued, gradual return to upland-based transhumance strategies, with one in five published structures located higher than 300 m above sea level and textile production at its greatest ever level (Pope 2003a). A growth in the display qualities of settlement and increased monumentalisation of domestic architecture is apparent virtually everywhere.

In many parts of lowland Britain, the transition to the Later Iron Age saw a more emphatic separation of activities and/or social groups both within their own settlements and within larger, 'communal' sites, as well as increasingly bounded landscapes. At the meeting, Melanie Giles suggested that the construction of linear earthworks might be manifestations of a process of 'psychological warfare' engendered by political tensions involved in tenurial rights and inheritance claims.¹⁵ Steve Willis proposed that they might instead be viewed as the result of 'political negotiations' in a pre-conflict stage of interaction between neighbouring groups. As Wells notes, such boundaries were a way of *fixing* social relationships, providing an 'official version' of matters that had previously been fluid. In East Yorkshire, communities may have legitimised claims to land by associating linear earthworks with earlier round barrows and, later, by locating barrow cemeteries beside them (Giles). Moore, too, sees the shift toward enclosure and increased definition of individual households as potentially linked to raised tensions

over land and/or growing population, but almost certainly signifying major social changes.

Pope's (2003a) research in north and central Britain indicates a higher density of buildings per site around the Earlier to Later Iron Age transition than at any other time in prehistory (Fig. 2a). This might imply an increased attachment to place, with settlements being used for longer periods of time; fragmentation of domestic space into separate arenas of practice; or even agglomeration into larger social groups in the landscape – all of which could be linked to rising population, although we must acknowledge the difficulties in assuming that the published structural dataset is representative of demographic change.¹⁶ At face value, the subsequent dramatic increase in Later Iron Age site numbers (Fig. 2b) implies that, if anything, the initial rate of population increase accelerated still further in the later first millennium BC, especially now that developer-funded archaeology is revealing significant numbers of unenclosed settlements of Later Iron Age date in landscapes that were supposedly dominated by enclosed settlements at this period, such as north-east England (e.g. Haselgrove 2002a).



No. of sites

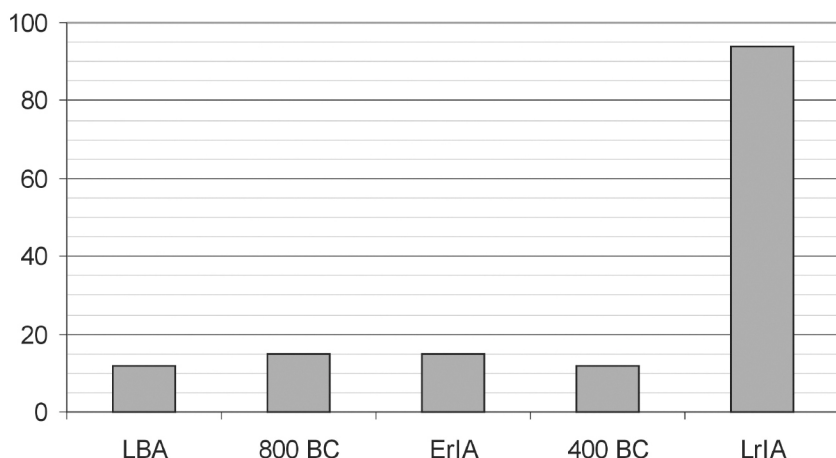


Fig. 2. Chronological distribution of the number of roundhouses per site ($n = 616$) and of sites per period ($n = 148$) in north and central Britain (source: Pope 2003a).

During the fourth century BC, the character of pottery assemblages began to change in southern Britain, with a significant decline in quality and a marked reduction in the use of decoration, which Sharples suggests may indicate the declining importance of signalling status and gender distinctions in this manner in a settlement context. However, by the start of the third century BC, this transitional period had come to an end, and a distinctive series

of new ceramic forms were established throughout southern Britain (cf. Cunliffe 2005). Moore (2007) sees the growth of production and regional exchange in the Later Iron Age as indicating a move beyond local concepts of identity, as communities begin to interact within a wider socio-economic system. In north and central Britain, too, craft working returned to levels last seen in the Late Bronze Age (Pope 2003a). The domestic evidence suggests a further decline in local arable production and the strong reintroduction of the cooking pit might imply a return to the need for social cohesion. As we will see in the next section, this coincided with a rapid growth in both house- and settlement-based display. By implication, mechanisms of social cohesion were becoming increasingly influential around c. 400 BC.

The everyday

Houses and settlements

Our current model of domestic space sees life in the British Iron Age organised around sun-based cosmologies, as apparent in house orientation, left/right division of space and sunwise movement. This largely Wessex-based model cannot, however, be seen as representative of the rest of Britain (Pope). The archaeological evidence for north and central Britain reveals a general trend towards the active use of front space in the roundhouse, another feature being the apparent importance of peripheral space in house design. It can also be assumed that an upper floor was utilised for sleeping and storage activities in structures of 7 m diameter and above. Whilst there is evidence for the stalling of animals in the peripheries of some northern structures (Pope),¹⁷ Sørensen suggests – based on the template of the unenclosed Danish byre-dwelling – that in most of England, livestock and people were not housed together, because of the provision of enclosure space. For Sørensen, the roundhouse provides a ‘larger more loosely structured household space’ than the self-sufficient Danish longhouse. At Crick, artefact deposition was more popular towards the front of drainage gullies, hinting at the frontal location of domestic middens (Woodward and Hughes).

Another key theme is the consideration of house life cycles, which

Brück links to the lives of the occupants; the dismantling or destruction of the house perhaps signifying the death of a household member. Evidence from north and central Britain suggests that house abandonment was generally planned in later prehistory (Pope), which accords well with the growing evidence for closing deposits (e.g. Brück 1999; Bevan). Brück suggests that rebuilding a house might represent a visual statement of inheritance, or a way of expressing continuity with the past. She begins to explore the idea that rebuilding might indicate seasonal re-occupation of sites, speculating that rebuilding the house might be a way of re-establishing and maintaining seasonal grazing rights. Needham's emphasis on rebuilding and genealogy – rather than shifting settlement – in the Earliest Iron Age is perhaps misplaced, however, as this is not a general trend in the period (Pope 2003a).

The Earlier Iron Age in north and central Britain sees an increase in the number of buildings containing hearths,¹⁸ coupled with a decline in the provision of external hearths, perhaps implying that more activity was taking place within the house (Pope 2003a). This might also explain the increase in the provision of internal pits throughout the period. At the same time, however, we see a decline in evidence for storage within the house, although this may be balanced by the increase in the provision of an upper floor, which declines at the transition to the Later Iron Age. Orientation of enclosures towards east is more marked during the Earlier Iron Age than at any other time. Focus, however, shifts back to the household around 400 BC. At this time, the number of buildings in north and central Britain with elaborate porches rises from one in four during the Earlier Iron Age to around two-thirds of all houses (*ibid.*). This further growth in the importance of house-based display, perhaps at the expense of communal practices, mirrors changes in southern Britain at the onset of the Later Iron Age implying that greater emphasis was being placed on definition of individual households.

In Wessex, the Earlier Iron Age is defined not only by large houses like Cow Down and Pimperne (Harding *et al.* 1993; Hawkes 1994), but also by a range of settlement enclosures. Further west, hillforts are the only enclosed sites found until the Later Iron Age (Moore). Similarly, in the Peak District and Atlantic Britain, most Earlier Iron Age settlements consist of unenclosed roundhouses

(Bevan; Henderson). However, as we noted above, this does not apply to all parts of north and central Britain, where there is in fact an overall decline in the number of unenclosed settlements during the Earlier Iron Age from some two-thirds of sites around 800 BC to less than one in seven by c. 400 BC, accompanied by a steady increase in *elaborate enclosure*.¹⁹ Regionality is clearly a major factor. In general, Earlier Iron Age site types include both unenclosed roundhouses, open and enclosed settlements, the midden sites of 800–600 BC,²⁰ palisaded enclosures, hillforts and other early hilltop enclosures (Brück; Needham; Cunliffe 2005).

Material culture

Humphrey's work shows that flint in Iron Age contexts is not necessarily residual. Iron Age flint working is generally crude, small-scale and decreases with the availability of other tool types, and in addition, is rarely found on hilltop enclosures. Nevertheless, flint was just as effective as metal for butchery tasks, and its continued employment sits well with the rarity of early ironwork. Following Ehrenreich (1994), Needham suggests that in the first centuries of the Iron Age, ironworking was conducted at a local level and production was small-scale – which would have led to intensive recycling activities. For bronze, Llyn Fawr metalwork generally consists of axes, swords, and razors, and most hoards of the period consist almost entirely of axes, a great many of which are non-functional (O'Connor). Needham notes the fine quality of much of the relevant metalwork and asks whether this might relate to the retention of bronze for ritual purposes in the Earliest Iron Age. He suggests that it is in this context that we might view the ostentatious cauldron deposits of the period.

Having previously suggested that craft production may have taken place during large seasonal gatherings where labour, resources and expertise were pooled (Needham *et al.* 1996), Needham develops the idea here, proposing that craft production and distribution may have involved mechanisms of community patronage. From Brück's dataset, late second and earlier first millennium BC metalworking evidence and coarse stone tools are concentrated at early communal sites but not at hilltop enclosures, whilst salt working and ceramic production generally took place at

open sites. Whilst ceramics were generally locally made, Brück suggests that the increased scale of manufacture seen at certain sites might represent a first move toward specialisation. As for textile production, weaving took place in both lowland and upland contexts but was absent from hilltop enclosures, whilst more spinning took place in the uplands. Jet and shale production was usually located near to source. Brück's analysis leads her to conclude that early communal sites – ringworks and midden sites – were craft foci. An inverse relationship between artefacts made from shale and bronze at Potterne leads Humphrey to speculate that when copper alloy was unavailable or not in demand, shale might have replaced it as an exotic raw material.

For Sharples, pottery production and ironworking in Wessex relied largely on local resources prior to the third century BC. Where non-local items are found, as at Potterne and Danebury, they relate to communal interaction and gift exchange rather than specialist production. Sharples also draws out the inverse relationship between material culture and monumental construction in strategies of elite competition, with both the Later Bronze Age and Late Iron Age being largely defined by the former strategy, the period in between by the latter. Turning to artefact deposition, Woodward and Hughes analyse the incidence of pottery and other material in drainage gullies around Earlier and Later Iron Age buildings in Northamptonshire and elsewhere, revealing a number of distinct spatial and temporal preferences, especially with regard to right-hand gully terminals when looking out, but concluding that such patterns cannot entirely be attributed to more general cosmological beliefs and that a range of factors were involved.

Bevan discusses the problems associated with local pottery chronologies outside Wessex. In the Peak District, as elsewhere in the north, slow-changing styles, the rarity of decoration and continued use of the same fabrics militates against the creation of typologies. The recent work at Mellor implies that Mam Tor type pottery was still in use in the Later Iron Age, again stressing the importance of routinely obtaining absolute dates (Haselgrove *et al.* 2001, 2–7). Further west, Earlier Iron Age assemblages from Atlantic Britain are characterised by Henderson as particularly utilitarian in nature. In his view, the rarity of La Tène artefacts in

western Britain should not surprise us, since such eastern traditions may have had little meaning to west-facing communities. In contrast to southern England, social position may have been conveyed in this zone throughout the Iron Age through means such as architectural display or the ownership of livestock, rather than by material culture.

Social organisation

Influenced by the rather different material remains from the periods before and after, many of the contributors see the Earlier Iron Age as a period defined by *community* identity. In both the Late Bronze Age and the Later Iron Age, the deposition of display metalwork and a trend towards enclosed settlement are accepted as evidence of hierarchical societies with a wider-ranging network of contacts (Sharples). Arguably, the idea of group identity may have been a conceptual problem for Earlier Iron Age communities and the archaeological record is a witness to their struggle to realise new social forms following the collapse of the Bronze Age 'super-system', as Chris Gosden noted at the meeting, but other mechanisms of social change might just as easily have led to the decline of bronze-based traditions. Doubtless a simple cause-and-effect model will be found wanting. Interesting discussions are taking place on how community identities might have been maintained. Ian Ralston has suggested that this may be apparent in the changing practices of display, with a shift from bronze deposition to domestic architecture occurring at just the time when it is proposed that community identity becomes greater than that of the household (Sharples). Interesting too, in this context, is the emergence of apparently communal sites,²¹ starting with the Late Bronze Age ringworks, and continuing in the Iron Age with the midden complexes and hilltop enclosures.

Among the possible instances of communal gatherings are the feasting episodes at midden sites (Serjeantson; Brück) and construction projects at hillforts (Brück; Gosden and Lock), where the substantial storage facilities could have supported the large numbers of people involved in the work (Sharples). Brück shows that such sites also have the greatest material wealth, but rather than seeing this as evidence of hierarchy, she suggests that this

relates to the variety of visitors to these places. The multiple entrances at hilltop enclosures are another possible sign of communal use, as they facilitate access from a variety of different directions. These locales were apparently used and/or returned to for some centuries, which Brück sees as expressing 'attachments to place', suggesting that events like rebuilding ramparts or re-digging ditches might be seen in this context. As with houses, this can be seen as a way of expressing a sense of continuity with the past or perhaps a way of reaffirming community ties.

At the seminar, Richard Hingley suggested that the Earlier Iron Age saw a move away from traditional ideas of lineal descent – where emphasis is on inherited, often enclosed space – to kinship groups (perhaps recognisable archaeologically as open settlements), where intermarriage between households results in relationships being formed across the landscape. Conceptually, the change from a landscape of isolated, territorially defined settlements, to one where neighbouring groups know each other and interact at various levels because they are related to one another, has enormous implications. Thinking in these terms also paves the way for a clearer understanding of the economic, social and ritual networks through which communities interact. Significant here is Sharples' analysis of the role of gift exchange in structuring relationships between different social groups, both locally and at long distance, as we move away from a purely economic understanding of Iron Age exchange systems. Other forms of social interaction might be apparent in the evidence for feasting at communal sites. Serjeantson notes that the Potterne sheep do not represent a subsistence flock and points towards agricultural specialisation, whilst Brück sees the livestock as that of one or more communities and suggests congregations of several hundred people at Runnymede. Might this be linked to the pooling of agricultural labour? The idea of communal labour has gained ground elsewhere.

Arguably, monument building was more important socially than the monument itself (Sharples; Gosden and Lock) and some projects represented an attempt to consolidate society by managing labour (Needham). Sharples sees labour as bound up in complex systems of gift exchange: individual households and communities could call in debts of labour and resources that had been built up over the years,

whilst providing labour creates obligations for the beneficiary community, ensuring their future participation in reciprocal acts. He believes that the mobilisation of labour and resources for boundary construction became the principal medium for competition following the abandonment of bronze, as sites with more substantial boundaries tend to be more densely occupied. Brück discusses how age or sex might structure building activities, as well as identity and intercommunity negotiation, and suggests shifting the focus from discussions of labour and power, to labour and social relations. In her view, the location of communal sites at the junctions of linear earthwork 'territories' might indicate an inter-community aspect to animal husbandry, perhaps involving the sharing of breeding stock or rights of access to pasture. Moore too, sees the act of enclosure as an inclusive process between communities rather than one representing defence and exclusion.

Giles applies the idea of labour relations to linear earthworks, which she sees as 'monuments to labour'. Both Giles and Wigley – working on East Yorkshire and the Welsh Marches respectively – discuss the idea of linear earthworks as community projects, and of gang working, with different groups responsible for separate stretches. Wigley mentions the possibility of the piecemeal construction of pit alignments and identifies subtle local variations between groups of earthworks, which might imply that each was the focus for a different community. For him, earthworks structure movement through the landscape; it was by *using* them on a daily basis as much as through building and maintaining them that people achieved a sense of communal identity. Both authors see the different kinds of linear boundaries as formalising established rights of access to different parts of the landscape and link their frequent association with earlier monuments to attempts to legitimise claims to land – although Sharples questions the idea of individual, or even household, ownership of land or resources in the first millennium BC. Standing back from the landscape evidence also allows broader patterns to emerge; the main density of linear ditches and pit alignment boundary systems in southern Britain complements the distribution of older fields, implying a significant dislocation between Bronze Age and Iron Age agricultural systems in many areas (Bradley and Yates).

Our understanding of Earlier Iron Age social organisation remains focused around communal interaction (Hill 1995a; 1995b). Here, however, James questions the academic consensus among post-processual archaeologists that has transformed our previously warlike chiefs into peaceful farmers, with the result that many recent studies of Iron Age societies in Britain make hardly any reference to warfare.²² He argues that the decline in weapon deposition in the Earlier Iron Age need not indicate any lessening in their use, whilst the fact that hillforts *were* surrounded by ‘practical circuits of ramparts and ditches’ implies that group identity was, to a significant degree, framed in terms of martial values. James suggests that we should accept conflict in the past as a social force worthy of study, rather than marginalising it because it is politically unfashionable in the present, although in order adequately to explore the role of warfare and violence in Earlier Iron Age societies, we need a suitably contextualised approach. Giles, too, touches on the potential for social conflict between individuals in her consideration of earthwork construction, arguing that such projects provided an arena for competitive and potentially violent interactions between individuals and groups.

Living in the landscape

A number of papers reassess the social and economic effect of climatic and environmental change during the earlier first millennium BC. Continuing the reaction against Burgess (1985), Bevan disputes the abandonment of upland landscapes in the Earlier Iron Age, citing some well-dated sites in the Peak District. The concept of ‘abandonment’ is seen as too simplistic; models for the Earlier Iron Age should be small-scale and landscape-sensitive with an emphasis on the *continuity* of local traditions over generations. Similarly, a small number of Late Bronze Age settlements continue into the Earlier Iron Age on the high moorlands of south-west England (Henderson). Like Bevan, Henderson reacts against the emotive terms used in previous discussions of social and environmental change in the uplands at the beginning of the Iron Age. Peat growth did not create ‘major social upheaval’, nor was there a mass exodus, rather movement over a few centuries in the central and eastern parts of the Lizard peninsula. It is also

debateable whether the Later Bronze Age spread of blanket peat (Huntley) would have had much direct effect on communities many generations later in the Earlier Iron Age.

We might see the effects of climate change in the Earlier Iron Age as being quite regional in their impact. In fact, the effects of climatic deterioration in the earlier first millennium BC – as apparently evidenced by trackway construction (e.g. Burgess 1980, 287; Cunliffe 2005, 33–4) – may have been a little exaggerated. If anything, the effects appear to be felt much earlier in the record. Using new ice core data, alongside evidence for social change in the domestic evidence of north and central Britain, Pope (2003a) sees a reaction to fluctuating climate change between c. 1200–750 BC taking effect as early as the later Middle Bronze Age. The worst phase, however, appears to have occurred at around the time of the Bronze Age to Iron Age transition, leading to changes in settlement location and subsistence strategies. In the Earlier Iron Age, there was some return to upland-based activity; whilst the effects of climate change continued to be felt, communities seem by this period largely to have adapted to the conditions, *contra* the earlier model of upland abandonment.

It remains unclear whether the apparent hiatus in occupation at several hilltop enclosures in north and central Britain between the eighth and sixth centuries BC is relevant. A number of sites with early first millennium BC origins, including Dinorben (Savory 1971), The Breiddin (Musson 1991) and Old Oswestry (Hughes 1994), have no houses dated beyond c. 750 BC, but were occupied again towards the end of the Earlier Iron Age (although others such as Eildon Hill North were apparently permanently abandoned; Owen 1992). Whilst our understanding of these sites is handicapped by limited excavation and few radiocarbon dates, we might speculate that something – possibly involved with the downturn in climate – affected the forms of social activity organised around these early hilltop enclosures. On the other hand, we should not overlook the apparent existence of a similar chronological gap in Wessex between the use of early hilltop enclosures for a short period around c. 800 BC and a proliferation of early hillforts proper in the sixth and fifth centuries BC (Cunliffe 2004; 2005).²³ Britain may simply be following a wider European trend, with peaks in the

use of fortified hilltop sites in Hallstatt B2–3 and again during Hallstatt D–La Tène A.

The creation of permanent field systems suggests intensive strategies of arable-based mixed farming during the Later Bronze Age in lowland Britain (Serjeantson), whilst there is evidence for the cultivation of hulled barley in northern Britain by the early first millennium BC (Huntley). In the Peak District, Bevan notes that each field system is separated from its neighbour by open ground; so are these fields, paddocks, or both? Notwithstanding the problems of dating, it seems clear that the construction of ‘Celtic’ fields lapsed in southern and eastern England in the early first millennium BC (Bradley and Yates). Interestingly, Yates sees their lynchets as perhaps an attempt to limit soil erosion. In northern Britain, woodland clearance appears to have been relatively steady throughout the late second and first millennia BC, although work at the local scale reveals the patchiness of arable cultivation across the region, perhaps a result of crop rotation or the shifting of cultivation through the landscape as soils became less fertile (Huntley). Evidence from the low-lying site of Reading Business Park reveals that cereals were not grown at every site, which might indicate the seasonal use of landscapes (Brück). At a different level, Bevan suggests that shifting settlement was linked to leaving land in fallow.

Serjeantson proposes that the Later Bronze Age intensification of arable-based farming led to increasing specialisation in sheep husbandry, whilst Brück relates midden sites, early hilltop enclosures and linear earthworks to the movement and enclosure of livestock. This would explain the presence of dung at midden sites, whilst evidence from Potterne reveals the use of both open air pounds and roofed byres (Needham). Serjeantson discusses both the focus on specialised (sheep) milk production and the consumption of pork at these sites. The Earlier Iron Age witnessed a decline in specialisation, especially pig rearing, as settlements became more self-sufficient, although the number of sheep continued to rise on the downland of southern England, with only western parts of Britain continuing to have cattle in any number (*ibid.*). In the Welsh Marches, the construction of pit alignments in areas of open grazing land and the strong association with water sources may link them to

cattle movement. In north and central Britain, a rapid growth in cattle-based pastoralist activity appears to take place in the period surrounding 800 BC. This continues into the Earlier Iron Age alongside shifts in farming strategy, with an increase in both sheep farming and local arable production (Pope 2003a).

In discussion, Ann Woodward called for more consideration of seasonality and settlement mobility, which Strat Halliday tied in to new work on house lifespans. By *mobility*, we mean the generational shifting of 'permanent' settlements (cf. Brück; Gerritsen), whilst *seasonality* is the short-term occupation of specific areas of the landscape, generally linked to agricultural tasks. Brück maintains that not all sites were seasonal and discusses the possibility of smaller age and/or gender-based groups carrying out set tasks like herding or salt production. Seasonal movements were also at different scales, with some tasks taking hours, others weeks or months, although in the increasingly busy landscapes of southern Britain, short-distance movement between pastures will have been the rule, probably over no more than a few kilometres (Serjeantson). In the Yorkshire Wolds, the nature and position of the various linear earthworks implies seasonal movements between the upland and valley zones thus delimited (Giles). At Crick, there was probably a mixture of seasonal occupation and year-round settlement (Woodward and Hughes); the location of the site at the watershed of several river basins and near an important natural route made it particularly suitable as a periodic gathering place, a role it probably performed over a period of some centuries. The earliest use of Uffington Castle is seen as sporadic and involving people moving along the Ridgeway (Gosden and Lock).

The various types of earlier first millennium BC 'communal sites' may have seen the congregation of people and livestock during the autumn/winter months. Centralised storage of winter fodder would best explain the high level of storage facilities at these sites (Needham). Brück proposes a model whereby gatherings at midden sites took place in winter alongside over-wintering, culling and breeding activities (Potterne), or in spring alongside lambing (East Chisenbury); and at early hilltop enclosures in the summer months, alongside the utilisation of upland grazing and low-lying pasture. She suggests that these seasonal gatherings were an occasion for

activities involving feasting and ritual, craft production and exchange – and may not have involved all members of a community. By contrast, in north and central Britain, an apparent increase of structures in year-round use at c. 800 BC – indicated by hearth location (see above) and an unparalleled concern with south-east orientation (maximising shelter and light in the winter months) – suggests a major change in land use during this period. However, at around 400 BC, there are again signs of more extensive seasonal use of landscapes: there is some return to the uplands, coupled with an increase in the use of smaller turf structures; the majority of hearths at this time are external, and there is a shift in orientation towards north-east. All of these can be seen as indicators of an increase in structures specifically occupied in the summer months (Pope).²⁴

European communities

The final group of papers look at aspects of the Earlier Iron Age in the lands facing Britain across the North Sea (Fontijn and Fokkens; Gerritsen; Sørensen); across the Channel (Diepeveen-Jansen; Haselgrove); in the Atlantic West (Henderson); and across central areas of temperate Europe (Wells). Mobility and seasonal occupation are again themes that come to the fore. In the ‘wandering settlements’ of the Netherlands, longhouses seem to have been relocated every generation until late in the Iron Age, when houses started to be regularly rebuilt on the same sites and nucleated settlements become increasingly common (Gerritsen). In the Paris Basin, we again see households shifting every generation in settlements that were themselves occupied for no more than three generations (Haselgrove). In the Atlantic west, it is suggested that many coastal promontory forts could have been the temporary settlements of sea-faring communities (Henderson), whilst Wells reminds us that the movement of goods and materials of different kinds is another indicator of the extent of mobility in Early Iron Age Europe, albeit mobility of a different kind. In addition to goods found far from their places of origin, there is abundant evidence showing the transmission of styles, motifs, and other elements in manufactured objects.

Although ‘Celtic’ field systems appeared in the Low Countries and

Scandinavia at much the same time as their counterparts in southern Britain, their period of use was quite different. Instead of apparently being abandoned at around the end of the Bronze Age as in Britain, this type of field system continued in use on the far side of the North Sea as late as the Roman Iron Age and in some instances probably only came to full development in the Early Iron Age (Fontijn and Fokkens). A difference in organisational principles is also apparent, as continental field systems – as well as generally being smaller – often seem more obviously to have grown up organically (Sørensen; cf. Gerritsen 2003). Fontijn and Fokkens suggest that the adoption of ‘Celtic’ fields signals a greater concern with territoriality at a time of settlement expansion and possibly population increase. An intensification of land use may lie behind the final decision to abandon many ‘Celtic’ fields in northern Europe (Bradley and Yates).

Wells focuses on the increased emphasis on boundaries of different kinds evident in temperate Europe between the eighth and fifth centuries BC and analyses their role in creating fresh distinctions and defining more complex identities. He reminds us that enclosure ditches around Earlier Iron Age settlements were only one way in which distinctions were emphasised. In Hallstatt and Early La Tène Europe, ditches were also used to demarcate burial places, whilst both objects for everyday use and for display were often decorated with patterns that emphasised boundaries. Wells focuses on the new, but often neglected, practice in the Late Hallstatt period of representing humans and animals on pottery and sheet bronze objects used in feasting and funerals. Both are key arenas for contesting social and political status, and Wells sees the figural representations on such objects as created by an emergent elite engaged in legitimating their increased authority and political power. During the fifth century BC, these practices declined and the style of ornament known as Early La Tène art emerged in their place. Although its style and content is quite different, many objects ornamented in the new tradition indicate relationships between humans, animals, and plants, leading Wells to suggest that they may well express the same basic themes: fecundity, rebirth, and communion with supernatural powers.

Whilst hoards ceased everywhere at the end of the Bronze Age,

and alternative ways of disposing of the dead were followed in Britain and Ireland, much of the near Continent saw the continuation of formal burial practices during the Earlier Iron Age – mostly in the form of modestly furnished cremation burials and urnfield cemeteries, but including extremely wealthy wagon graves and other rich burials in some areas and periods – thereby opening up a complementary perspective on these societies, which is exploited in several of the papers. Despite the broad continuity in burial practice across the Bronze Age to Iron Age transition, a number of significant changes are in fact apparent. For a start, over almost the entire region in which the longhouse was common, the large Middle Bronze Age structures gave way to much smaller buildings that housed fewer people and cattle (Fokkens 1997; Kristiansen 1998), implying major changes both in the composition of the household and in the social structure of the wider community by around 900 BC. At the same period, we see a new emphasis on the definition of local identities (Fontijn and Fokkens; Gerritsen).

In a landscape of wandering settlements, urnfield cemeteries provided a permanent focus for the local community. Gerritsen discusses the role of past monuments in the constitution of communal identity, showing how a series of Early Iron Age urnfields and ‘Celtic’ field systems reuse or reference older Bronze Age barrows. As a result of population increase and settlement expansion into new areas in the Early Iron Age, more communities than ever before were having to define themselves. The foundation of a collective urnfield will have been an important element in the initial expression of claims over land and the construction of a shared identity. Conversely, robbing and destroying burials – attested in several areas of Hallstatt and Early La Tène Europe – is a common way to evict people from their territory (Diepeveen-Jansen). After the urnfields had been given up for burial, they themselves became elements from the past, and in the Roman Iron Age, new cemeteries were founded in their vicinity.

Fontijn and Fokkens examine the demise of the long-established tradition of placing bronze weaponry and valuables in watery places and shift to burial deposition in Hallstatt C, as manifested in the ‘chieftain’ graves of the southern Netherlands. Although this appears as an abrupt break in the record, they argue that

depositional practices and ideas about the proper way to treat martial/elite objects were changing significantly before the Early Iron Age and that the change in social expression represented in these 'rich' burials is more apparent than real.²⁵ Nevertheless, we do see some new elements in them, mirroring those current in Central Europe – such as the ceremonial four-wheeled wagons. This new interest in supra-regional identities makes a significant contrast to the emphasis on communal identity apparent in the urnfield settlements and burial grounds.

In the Bronze Age, a distinction can be drawn between weapons and ornaments used in the construction of personal identities, and other valuables more associated with communal identities (Fontijn 2002). The former hardly ever ended up in Bronze Age burials, but were instead placed in wet places, from which Fontijn and Fokkens infer some sort of 'taboo' on the deposition of weaponry in burials. In the Hallstatt C graves, this was circumvented by the ostentatious, ritual killing of weapons placed in burials – in contrast to the weapons deposited in watery places at the same period, which were undamaged and ready for use. In the second millennium BC, the cultural biographies of individual bronze objects were evidently a major factor both in *what* was deposited and *where*, but during the Late Bronze Age this ceased to be the case.

As we noted at the start of the paper, much discussion of the Earlier Iron Age in mainland Europe has focused on the recurrent pattern of the emergence and disappearance of wealthy burials in different areas during the Late Hallstatt and Early La Tène period, which is the topic of Diepeveen-Jansen's paper. She is rightly critical of the common assumption that the material culture found in these burials directly reflects the social and political realities of the time – what she terms the Pompeii premise – and also questions why the individuals in the Late Hallstatt burials are interpreted as emulating Mediterranean culture, whilst their Early La Tène counterparts in the Marne-Moselle zone are treated as mere barbarian warriors. Such interpretations ignore the fact that our information derives from a ritual context, and take no account of the social role of mortuary rituals.

Accepting that social practices embedded in structural values of 'hospitality' and 'martiality' – and their 'ritual condensation' in

graves, hoards or sanctuaries – were indeed a medium for expressing elite status in later prehistoric Europe, Diepeveen-Jansen argues that we need to ask different questions of the material. Why are these practices so visible in the Earlier Iron Age? Why were certain items essential for constructing elite identity, and why were they deposited in particular contexts (cf. Fontijn and Fokkens)? As she notes, new social structures need new mechanisms of reproduction. Returning to the Marne–Moselle zone, she argues that we can detect a move away from socio-ritual practices which reproduced the community as a whole – which in the German core area were performed at Late Hallstatt hillforts – to practices which reproduced a specific group of people and the regional network to which they belonged, which points to a change in social structure. What was, in fact, under way in Early La Tène Europe, she concludes, was a gradual transformation towards hereditary structures linked by client relations, although this was not finally completed until Middle La Tène times.

As well as its abundant funerary data, the Aisne– Marne region has some of the best Earlier Iron Age settlement evidence to be found anywhere in Europe, as a result of the sustained programme of rescue excavations undertaken on the gravel terraces of the Paris Basin since the 1970s (Haselgrove). Nevertheless, significant gaps in the sequence remain, quite possibly as a result of the population having retreated to the lower slopes and outside the zone where extraction has taken place, serving as a timely reminder that developer-funded archaeology is hardly free of bias (cf. Champion; see also Phillips and Bradley 2004). On the other hand, the different types of Earlier Iron Age settlement found in the region – whether open or enclosed, whether shifting or rooted to one spot – are, almost without exception, less easy to detect and more amorphous in form than their Later Iron Age successors. Without excavations on such a large scale, our understanding of the overall settlement pattern would still be rudimentary.

The East Kentish rusticated pottery tradition implies that close links existed with north-east France and Flanders during the Earlier Iron Age (Champion; cf. Cunliffe 2005). More generally, the evidence of objects such as weapons, ornaments, tools, and pottery all indicate that Britain was an integral part of a wider European

system throughout the Earlier Iron Age (Collis 1994; Haselgrove 2002b). As John Collis has noted, it is not so much a surprise that Late Bronze Age contacts across the Channel continued unbroken through the following period, but that this pattern broke down in the fourth and third centuries BC. The break was not absolute, since certain ideas and objects continued to reach Britain, but must in some way be connected with the other changes at the Earlier to Later Iron Age transition, leading to greater emphasis on regional identities during La Tène C on both sides of the Channel.

As Sørensen shows, the difference between the circular building tradition in Britain and the rectangular/longhouse tradition on the Continent does have major implications for the way that domestic groups and activities were organised in the different zones.²⁶

Nevertheless, it is apparent that in other ways, developments during the Earlier Iron Age run parallel and the differences have been exaggerated (Haselgrove 2001). For example, not only do we see the same increased emphasis on food storage in the Earlier Iron Age in northern France (Gransar 2000) as in southern Britain – albeit perhaps from a slightly later date – but we also find remarkably similar rituals being enacted on French settlements connected with the use of grain storage pits (Delattre 2000). Whatever their function, early souterrains are found both in Brittany and in Cornwall, whilst Humphrey's findings about continued use of flint technology in the Earlier Iron Age apply with equal force to northern France (Pommepuy 1996; Haselgrove and Lowther 2005). Above all, we should not forget that a division just as significant and long-lived as that between round and rectangular houses existed within mainland Europe, between the longhouse tradition of the north European plain, with its emphasis on cattle breeding, and the settlement pattern of the zone to the south and west (e.g. Roymans 1996; Kristiansen 1998).

As Henderson notes, it is quite wrong to see the Atlantic zone as either culturally peripheral to Hallstatt and early La Tène Europe or geographically isolated. Strong maritime ties between the different coastal regions bound together the inhabitants of the Atlantic seaboard to form a separate community of interest (cf. Cunliffe 1995a). Henderson discusses the lack of known Earlier Iron Age settlements in Ireland, concluding that, as with much of Scotland,

assemblages belonging to this period are probably largely undiagnostic; there is also a distinct possibility that the generalised use of the term ‘ringfort’ – and an underlying assumption that such sites date to the first millennium AD – is masking Earlier Iron Age settlement. Having highlighted the difficulties with the material, Henderson suggests that developments in Ireland probably run alongside those in Scotland, an idea bolstered by the strong evidence for cultural contact across Atlantic Scotland, manifested in its shared architectural and ceramic traditions.

Research directions

A major shift in Iron Age studies in the last ten years – and one that works against the application of structuralist theory – has been towards increased theoretical understanding of the complexity of human action (Pope; Woodward and Hughes). In most post-processual accounts, the ‘everyday’ has been seen as being dominated by agricultural and domestic tasks and routines, matters traditionally overlooked by the grand narratives of trade, settlement hierarchy and Celtic society, but the time has come to widen our approach. This also means rethinking the way that we confront our datasets and, in particular, putting more emphasis on material culture studies (cf. Haselgrove *et al.* 2001). Analysing changes in ceramic assemblages, for example, can provide insights into the cooking of food, diet and site function, which in turn may lead us to an understanding of other social practices, such as feasting (e.g. Hill 2002; Pope 2003b). At the same time, we are beginning to realise the potential of approaches integrating artefacts, ecofacts and settlement evidence – so often the domains of different specialists – in a landscape perspective (e.g. Moore; Sharples). Serjeantson, for example, notes how residues on pottery in various assemblages are supplying evidence for dairying strategies, which can also be linked to on-site facilities for keeping animals and storing food. Important too are traditions of deposition, both ritual and more normative; these small-scale events provide an increasingly rich picture of past human action (Bevan; Woodward and Hughes).

As well as a heightened appreciation of the real fluidity both of settlement and landscape, the turn toward social theory has seen a move away from static models of behaviour. A simple left/right

division of Iron Age domestic space has been found wanting when tested against other, more detailed evidence, whilst boundaries are treated not as static components of the landscape, but rather as multi-phase monuments with evidence for turf lines and individual dumping episodes. Following the seminal work of Hill (1995b), a more sophisticated understanding of ritual practice is being incorporated into studies of the everyday, and, crucially, is now influencing research design in the field (Woodward and Hughes). Several papers comment on the need for a more thorough approach to the archaeological record; Pope stresses the need for more critical use of analogy, whilst at the meeting, Graeme Guilbert called for caution in interpreting the subtleties of settlement evidence. Important, too, is Giles' work on identity and practice, which hopefully heralds an increasingly sensitive approach to the material.

A major task is to resolve problems of terminology in the Atlantic west, with targeted research to elucidate the chronology of settlement developments in the constituent regions. Elsewhere, the existing chronological frameworks are in need of further refinement, even in regions where pottery is relatively abundant (Champion). As the work at Danebury (Cunliffe 1995b) and on Bronze Age metalwork (Needham *et al.* 1997) demonstrates, the way forward lies in combining ceramic and metalwork chronologies with absolute dating, which should finally free us from our present reliance on typological schemes. Radiocarbon dating must become routine everywhere, not just in pottery-poor areas. As well as being our best means of confidently attributing sites and occupation phases to the Earlier Iron Age in the first place – its success in this role is under-rated – it will permit structures belonging to the transition periods around 800 and 400 BC respectively to be distinguished from those in between (Ralston and Ashmore). However, for greater precision within the plateau region, new approaches will have to be invoked, as dendrochronology is never going to be widely applicable. Certainly, outside lowland Britain, topics such as settlement mobility, seasonality and the apparent hiatus in occupation at hilltop enclosures, cannot be resolved without improved dating. Bayesian analysis offers an obvious way forward wherever suitable stratigraphic sequences exist.

There is a growing awareness of the importance of integrating

published and unpublished data, as in Champion's work in Kent.²⁷ Studies that rely essentially on published sites (e.g. Brück; Pope), whilst a necessary first step, run the risk of reifying existing regional imbalances. At present, however, there are massive problems in working with grey literature at anything beyond regional level. What has become apparent is the real shift towards a landscape perspective in settlement studies that developer-funded archaeology has made possible (e.g. Haselgrove). This is especially valuable when attempting to identify presence/absence of settlement and the varying use of upland and lowland landscapes, and because it can reveal evidence for aspects of Earlier Iron Age behaviour, which have hitherto escaped detection. One of these is disposal of the dead. Giles has suggested that cremations may have been added to Earlier Bronze Age barrows well into the Earlier Iron Age. Many questions need to be answered. When, for example, do we see the cessation of cremation cemeteries? Does the Late Bronze Age practice of depositing human bone in watery locations continue into the Earlier Iron Age? When do we begin to find significant levels of human bone on settlement sites? We should also bear in mind that burials were only a part of more complex funerary rituals in which the performers acted out specific practices and used objects we find today to convey particular meanings to the participants and observers (Wells). We may lack the actual burials in Britain, but this does not mean we cannot recover some traces of these other elements if we think to look for them.

The existence of specialised ritual sites during the period – from Ballachulish to Fiskerton – is another topic that merits attention.²⁸ Equally, as Bradley and Yates note, we have been far more successful in showing that hillforts were used for ritual purposes than in working out who lived there. Whilst we now have a better perspective on the relevance of hillforts to the British Iron Age as a whole, we should not overlook the fact that, in the areas where they do exist, many of the biggest questions confronting Earlier Iron Age studies continue to revolve around the social role of hillforts. What lies behind their Late Bronze Age origins, their proliferation in the sixth and fifth centuries BC and their equally dramatic reduction in numbers thereafter? Were the activities performed at hillforts different in kind from those carried out elsewhere in the landscape

(Bradley and Yates)? Do they signify a martial dimension to the communities associated with them (James)? Does their relative uniformity of appearance ultimately conceal a diversity of social strategies (Gosden and Lock)?

Many papers recognise the need for a multi-scalar approach, integrating local- and regional-level studies with broader narratives of social change. As Sørensen neatly puts it: 'life is the tension between its smallest detail and its largest expression'. She calls for different scales of analysis in Iron Age studies: to address small-scale domestic routines *and* larger-scale trends. This is recognised by Wigley, who highlights both the general similarities between systems of earthworks and more subtle, local differences, by which we may begin to recognise specific communities. Henderson too, sees 'regionalism and local distinctiveness occurring within an overall shared cultural milieu', whilst Needham stresses the need for a broad understanding of pottery developments alongside detailed analysis of small-scale variations in ceramic form, with the wealth of social and cultural information this can provide. Sharples returns to earlier work linking variations in the Later Bronze Age pottery and metalwork record to a tiered system of exchange networks at domestic, regional, and pan-European scales. Both he and Moore call for a return to understanding social change from a broader perspective, whilst taking care in our use of terms like 'household', which could have varied significantly over both time and space.

Whilst we are undoubtedly making progress in understanding the Earlier Iron Age as a period in its own right and in its different regional manifestations across Britain and the near Continent, a last lesson to emerge from the papers is that more scholars need to be prepared to bridge the current divide between Bronze Age and Iron Age studies. Not only will this lead to a clearer understanding of the process whereby one social system was transformed into another, but, much more significantly, it will help us to develop longer-term perspectives on key topics such as anthropogenic and climatic impact on the environment, the monumentalisation of place, and structured deposition, which transcend the conventional period boundaries.

In conclusion

The abandonment of bronze was but one aspect of change in the basic social value system of people in Britain at c. 800 BC. Other changes include the emergence of 'communal sites' and greater social cohesion, and a dramatic increase in house size. We see a move away from upland landscapes in north and central Britain, and from field systems everywhere, to lower-lying settlement and linear earthworks. In northern Britain, there is also evidence for increasing involvement in communal arable production and cattle raising. This shift in subsistence strategies at the very start of the Earlier Iron Age, perhaps accompanied by a period of low resources, may be what generated increasing social cohesion. There was a general move away from the expression of identity via material culture towards its display through the design and construction of settlement and landscape architecture. The transition period involved a shift from individual or household expression towards increasingly communal social forms.

In many areas of Britain, the Earlier Iron Age is characterised by a lack of settlement evidence. This may be an artefact of survival and/or lack of research, or a genuine indicator of low population densities. Such Earlier Iron Age assemblages as we possess imply fairly insular and traditional communities, with fewer long-distance contacts. Nevertheless, there was continued growth of local communities with activities such as feasting perhaps ensuring the successful integration of larger social groups. By implication, labour and resources were pooled beyond the level of the household. It is perhaps telling that the period is characterised by display practices that work at both community and household level. A key concern throughout the Earlier Iron Age was with food production and storage, with a self-sufficient mixed farming economy based on sheep-farming and arable production. It was not until the end of the period that we see signs of population growth and the beginning of a return to upland landscapes.

The transition from Earlier to Later Iron Age social forms seems to have been relatively swift. New settlement types appear in many areas by the later fourth century BC and the density of sites began to increase rapidly. There was a greater attachment to place, alongside an increasingly bounded landscape, and a process of agricultural intensification began, although not reaching its zenith

for another century or two. Artefact assemblages reveal a resurgence of regional exchange and craft production. Whilst the emphasis was still on community, there was now also more individual expression, with a rapid growth in display architecture at both enclosure and household level. Alongside this was an increasing tendency to subdivide social space – especially at communal sites – which might reveal the desire to separate off different activities or groups of people, either of which would provide a locus for the future growth of new identities in the face of continued population increase.

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Notes

1. The evidence for the revised dating of Hallstatt C on the Continent is reviewed in detail by O'Connor.
2. At this time, and up until the 1960s, the term 'Early Iron Age' was routinely used for the whole of the pre-Roman period, with the term 'Late Iron Age' applied to the Anglo-Saxon period (Smith 1925, iii) and contemporary cultures elsewhere in the British Isles; in other words, in the sense that many Scottish archaeologists view the 'Earlier Iron Age' today as the first half of a 'long Iron Age' continuing until the Norse incursions and minimally affected by the Roman presence in Scotland in the early centuries AD (Haselgrove *et al.* 2001, 3; Harding 2004, 3–5).
3. Whilst the occupation of All Cannings Cross neatly spans the Earlier Iron Age as defined here, Cunington (1923) employed the term 'Early Iron Age' in the then prevailing sense of the whole pre-Roman Iron Age, not that she was in any doubt of the site's importance in throwing 'light on the earlier part of the pre-Roman Iron Age, a period which hitherto has been a particularly obscure one in British archaeology'

(*ibid.*, 14). Moreover, since the pottery from coastal sites like Hengistbury might conceivably have arrived by trade, the 'discovery so far inland... of a site where pottery of Hallstatt type was used over a considerable period proves conclusively that there was an actual settlement of people... All Cannings Cross may claim to be the first site that has yielded decided evidence that the Hallstatt phase of the Early Iron Age has a definite and distinct place in British Archaeology' (*ibid.*, 15). Her only real mistake was not to distinguish the earliest pottery types – the 'Early All Cannings Cross Group' (Cunliffe's 1974a, 31–3) – and to be led by the brooches into dating the site no earlier than fifth to fourth centuries BC, despite the presence of earlier objects like the Armorican axe and tanged bifid razor.

4. Invariably, the models of the period envisaged a significant time lag between stylistic or technological innovations in mainland Europe and similar developments in Britain, ideas only being gradually spread by migrants and/or trade, further hindered by the supposed conservatism of many later prehistoric cultures. The spread of iron technology is a good example. Even though iron using was thought to have begun in the eastern Alpine region as early as c. 900 BC (Déchelette 1913) and the Swiss lake villages were supposedly destroyed no later than 800–700 BC by groups armed with iron swords (Crawford 1922; Peake 1922), iron technology did not reach Britain until the seventh and especially sixth centuries BC (Hawkes 1930; 1931). Although radiocarbon dating has done much to dispel such notions, they still occasionally surface today, although, as Collis (1994, 135) has trenchantly argued, if a new dance could spread across a thinly populated continent such as Australia within a generation, why should we assume any significant time lag in a well-populated prehistoric Europe?

5. A few years earlier, John Collis (1977, 6) suggested adopting a similar framework, albeit with slightly different date ranges.

6. The extensive radiocarbon dating programme carried out at Danebury (Cunliffe 1995b, 17–18; 129–36) implies a date at the end of the fourth century BC for the earliest groups of undecorated Middle Iron Age saucepan wares, with decorated forms becoming common in the third century BC (Cunliffe 2005, 106); the metalwork associations point the same way (Haselgrove 1997). Cunliffe's (1984) division between the Middle and Late Iron Ages was called into question by Haselgrove (1989), who argued that this was of limited relevance beyond southern England and that it made more sense in many areas to treat the Later Iron Age as an entity (see Haselgrove and Moore 2007).

7. Partly also a function of the different approach to Iron Age chronology north of the border.
8. As O'Connor notes, Northover (1988) considers that British examples of Armorican axes were not necessarily non-functional – although other types such as the Dorset linear-faceted axes certainly were.
9. At Hartshill Quarry, iron hammerscale was found in the post holes of two circular structures with radiocarbon dates between the late eleventh and early ninth centuries cal. BC, placing them in the Ewart Park phase (Collard 2005, 136; 139). Due to the sharp increase in iron objects found in contexts attributed to Bronze Finale IIIb – broadly equivalent to late Ewart Park in Britain – some French archaeologists prefer to regard this phase structurally as part of the Iron Age (e.g. Brun 1986).
10. Subdivision of the period into 'Earliest' and 'Early' Iron Age phases (c. 800–600 BC and 600–400/300 BC respectively; Cunliffe 2005, 32), whilst applicable to much of southern England and used by some of the contributors here, suffers from the same problems with regard to the rest of Britain as the 'Middle' and 'Late' division (note 5 above), this time compounded by the radiocarbon plateau between c. 800–400 cal. BC and the difficulties this poses for differentiating sites within this range. Hence our preference here for the umbrella term Earlier Iron Age.
11. Pope's analysis was confined to published sites and excluded complex architecture from Atlantic Scotland (including the Northern and Western Isles). A line from Aberystwyth to the Wash formed the southern limit of her study area.
12. The distribution of published Earlier Iron Age sites in north and central Britain shows a notable cluster centred on south-east Scotland and another extending from north Wales into central England, with much lower densities and/or largely blank areas in between.
13. Whether Brück envisages hilltop enclosures as *pre-transition* in lowland Britain, is unclear due to her definition of the period 800–600 BC as the final Bronze Age. In Wessex, Cunliffe (2004) would see these sites as dating primarily to the period of transition 850–750 BC, possibly in a few cases, carrying on after 750 BC.
14. Pope's (2003a) data was analysed as percentages rather than simply numerically, meaning that this decline is believed to be genuine and not an artefact of the incidence of fewer houses dating to this period.
15. As Giles stated, 'you don't engage in a monumental programme unless there's something at issue'.

16. Another possibility is that house lifespans decreased as population remained static (S. Needham pers. comm.), but the architectural evidence does not particularly seem to point this way.
17. An increase in peripheral space at c. 800 BC in north and central Britain may be linked to the short-lived increase in cattle-based pastoralism apparent at this period.
18. Pit-hearths and slab settings are the most popular hearth types in the Earlier Iron Age, as throughout much of later prehistory.
19. The definition of *elaborate enclosure* used here is the repetition of an enclosing feature, for example a double palisade or wall, and bi- or multi-valuation.
20. Since 2003, a new 'midden' site has been under investigation at Llanmaes in the Vale of Glamorgan (Lodwick and Gwilt 2004; forthcoming), significantly extending the confirmed occurrence of this class of site beyond its core distribution in Wessex and the Thames valley. To date, three roundhouses – probably occupied sequentially – and two large pits have been revealed next to an extensive midden deposit. The Llanmaes finds include a minimum of nine bronze vessels (four cauldrons – three of Class B2 form – and five ring-handled bowls), a small cup or ladle, and various other items of metalwork (including five Armorican and four Sompting axes), along with abundant pottery and animal bone (around three-quarters of which is pig), providing ample evidence for feasting and meat consumption. Radiocarbon dates indicate that the midden was generated between the eighth and fourth centuries BC.
21. We prefer Brück's term 'communal sites' to Needham's 'central places' because of the nuances associated with the latter term in Iron Age studies.
22. Other Iron Age archaeologists like Barry Cunliffe (e.g. 1995a, ch. 7; 2005, ch. 19) have continued to emphasise warfare in their accounts of their period and the topic is also generally more prominent in Iron Age studies on the Continent (see Haselgrove and Moore 2007). James' view, that the 'baseline state' for Iron Age Britain is better characterised as 'endemic insecurity' than as peace, is backed up by a recent reassessment of the human remains from Danebury, which provides some evidence of violent killing and mutilation (Craig *et al.* 2005).
23. The gap could yet still be closed: it is not yet clear whether activity at any of these early hilltop enclosure continued significantly into the Earliest Iron Age (Cunliffe 2004, 69), nor is it certain how early in the period 800–600 BC, the so-called 'ridge-end' forts like Lidbury Camp were first occupied.

24. For a discussion of the seasonal use of upland sites in Scotland, see Halliday (1999).

25. The fact that Gündlingen swords are deposited both in watery places and in burials leads Fontijn and Fokkens to regard the Wehringen phase of Hallstatt C as a true period of transition, involving both new and old practices, very much as is argued for Britain.

26. Whilst the general pattern holds, the distinction between rectangular buildings in mainland Europe and insular circular structures is no longer quite as absolute. Several circular buildings of Late Bronze Age or Early Iron Age date have recently been excavated in Normandy (e.g. Jahier *et al.* 2000) and both stone and timber roundhouses of this period are known in Brittany (Henderson). There are several plausible examples of Iron Age rectangular aisled buildings in Britain, as well as smaller post-built and sleeper-beam rectangular structures (Moore 2003).

27. See Phillips and Bradley (2004) for an overview of the prehistoric evidence recovered in Scotland since 1990 by developer-funded fieldwork, and the significant impact this has had. As they note, Harding's (2004) synthesis of the northern Iron Age does incorporate the results of recent rescue excavation, but they do not play a central part in his account, which still rests primarily on studies of well-preserved sites – often in the uplands, rather than in the lowlands where fieldwork in advance of commercial development is focused.

28. The Ballachulish figure was found beneath what may have been a collapsed wicker structure, which could have been part of a shrine (Coles 1990). Alternatively, it and other anthropomorphic figurines of the period – such as the group in a boat from Roos Carr – could be votive offerings. At Fiskerton, dendro-chronological dating shows that timber posts associated with the causeway were erected on at least ten occasions between the first felling date of 457/456 BC and the last of c. 321–291 BC (Field and Parker Pearson 2003). Associated finds include early La Tène weaponry (including six swords) and a group of metalworking and woodworking tools, as well as some human bone.

Bibliography

- Alcock, L. 1972. The Irish Sea province in the pre-Roman Iron Age, in A.C. Thomas (ed.), *The Iron Age in the Irish Sea Province*, 99–112. London: Council for British Archaeology Research Report 9.
- Armit, I. and Ralston, I.B.M. 1997. The Iron Age, in K.J. Edwards and I.B.M. Ralston (eds), *Scotland after the Ice Age: Environment, Archaeology and History 8000 BC–AD 1000*, 169–193. Edinburgh: Edinburgh University

Press.

- Barrett, J. 1980. The pottery of the Later Bronze Age in lowland England, *Proceedings of the Prehistoric Society* 46, 297–319.
- Barrett, J. and Bradley, R. (eds) 1980. *Settlement and Society in the British Later Bronze Age*. Oxford: British Archaeological Reports British Series 83.
- Bevan, B. (ed.) 1999. *Northern Exposure: Interpretative Devolution and the Iron Ages in Britain*. Leicester: Leicester Archaeology Monograph 4.
- Bradley, R. 1984. *The Social Foundations of Prehistoric Britain*. London: Longman.
- Brück, J. 1999. Houses, lifecycles and deposition on Middle Bronze Age settlements in southern England, *Proceedings of the Prehistoric Society* 65, 1–22.
- Brun, P. 1986. *La civilisation des Champs d' Urnes. Étude critique dans le Bassin parisien*. Paris: Documents d'Archéologie Française 4.
- Brun, P. 1987. *Princes et Princesses de la Celtique. Le Premier Age du Fer (850–450 av. J.-C.)*. Paris: Editions Errance.
- Budgen, W. 1922. Hallstatt pottery from Eastbourne, *Antiquaries Journal* 2, 354–360.
- Burgess, C.B. 1980. *The Age of Stonehenge*. London: J.M. Dent and Sons Ltd.
- Burgess, C.B. 1985. Population, climate and upland settlement, in D.A. Spratt and C.B. Burgess (eds), *Upland Settlement in Britain: the Second Millennium BC and after*, 195–231. Oxford: British Archaeological Reports British Series 143.
- Cameron, C.M. 1991. Structure abandonment in villages, *Archaeological Method and Theory* 3, 155–194.
- Champion, T.C. 1989. From Bronze to Iron Age in Ireland, in Sørensen and Thomas 1989, 287–303.
- Champion, T.C. and Collis, J.R. (eds) 1996. *The Iron Age in Britain and Ireland: Recent Trends*. Sheffield: J.R. Collis Publications.
- Collard, M. 2005. Hartshill Quarry. The oldest ironworking site in Britain? *Current Archaeology* 195, 134–139.
- Coles, B. 1990. Anthropomorphic wooden figurines from Britain and Ireland, *Proceedings of the Prehistoric Society* 56, 320–332.
- Collis, J.R. 1977. An approach to the Iron Age, in J.R. Collis (ed.), *The Iron Age in Britain: A Review*, 1–7. Sheffield: Department of Prehistory and Archaeology, University of Sheffield.
- Collis, J.R. 1994. The Iron Age, in B. Vyner (ed.), *Building on the Past*, 123–148. London: Royal Archaeological Institute.
- Collis, J.R. 2002. Danebury, its environs, and the Iron Age in Hampshire, *Landscape History* 24, 91–94.

- Craig, R., Knüsel, C. and Carr, G. 2005. Fragmentation, mutilation and dismemberment: an interpretation of human remains in Iron Age sites, in M. Parker Pearson and N. Thorpe (eds), *Warfare, Violence and Slavery in Prehistory*, 165–180. Oxford: British Archaeological Reports International Series 1374.
- Crawford, O.G.S. 1922. A prehistoric invasion of England, *Antiquaries Journal* 2, 27–35.
- Cunliffe, B. 1974a. *Iron Age Communities in Britain* (1st edn). London: Routledge and Kegan Paul.
- Cunliffe, B. 1974b. The Iron Age, in C. Renfrew (ed.), *British Prehistory: A New Outline*, 253–262. London: Duckworth.
- Cunliffe, B. 1984. Iron Age Wessex: continuity and change, in B. Cunliffe and D. Miles (eds), *Aspects of the Iron Age in Central Southern Britain*, 12–44. Oxford: Oxford University Committee for Archaeology Monograph 2.
- Cunliffe, B. 1991. *Iron Age Communities in Britain* (3rd edn). London: Routledge.
- Cunliffe, B. 1992. Pits, preconceptions and propitiation in the British Iron Age, *Oxford Journal of Archaeology* 11, 69–83.
- Cunliffe, B. 1995a. *Iron Age Britain*. London: Batsford.
- Cunliffe, B. 1995b. *Danebury: an Iron Age Hillfort in Hampshire, Vol. 6. A Hillfort Community in Perspective*. York: Council for British Archaeology Research Report 102.
- Cunliffe, B. 2000. *The Danebury Environs Programme. The Prehistory of a Wessex Landscape, Vol. 1. Introduction*. Oxford: Oxford University Committee for Archaeology Monograph 48.
- Cunliffe, B. 2004. Wessex cowboys? *Oxford Journal of Archaeology* 23, 61–81.
- Cunliffe, B. 2005. *Iron Age Communities in Britain* (4th edn). London: Routledge.
- Cunnington, M.E. 1923. *The Early Iron Age Inhabited Site at All Cannings Cross, Wiltshire*. Devizes: George Simpson.
- Cunnington, M.E. 1932. Was there a second Belgic invasion represented by bead-rim pottery? *Antiquaries Journal* 12, 27–34.
- Davies, J.L. and Lynch, F. 2000. The Late Bronze Age and Iron Age, in F. Lynch, S. Aldhouse-Green, and J.L. Davies, *Prehistoric Wales*, 139–219. Stroud: Sutton.
- Davies, M.H. 2007. Dominated by unenclosed settlement? The Later Iron Age in eastern Scotland north of the Forth, in Haselgrove and Moore 2007, 266–285.
- Déchelette, J. 1913. *Manuel d'Archéologie Préhistorique, Celtique et Gallo-Romaine, Vol. II-2. Premier Age du Fer ou Epoque de Hallstatt*. Paris:

Picard.

- Delattre, V. 2000. Les inhumations en silos dans les habitats de l'âge du Fer du Bassin parisien, in Marion and Blancquaert 2000, 200– 311.
- Ehrenreich, R. 1994. Ironworking in Iron Age Wessex, in A.P. Fitzpatrick and E.L. Morris (eds), *The Iron Age in Wessex: Recent Work*, 16–19. Salisbury: Trust for Wessex Archaeology.
- Field, N. and Parker Pearson, M. 2003. *Fiskerton. An Iron Age Timber Causeway with Iron Age and Roman Votive Offerings*. Oxford: Oxbow Books.
- Fitzpatrick, A., Butterworth, C.A. and Grove J. 1999. *Prehistoric and Roman Sites in East Devon: the A30 Honiton to Exeter Improvement DBFO Scheme, 1996–9*. Salisbury: Wessex Archaeology Report 16.
- Fontijn, D.R. 2002. *Sacrificial Landscapes. Cultural Biographies of Persons, Objects, and 'Natural' Places in the Bronze Age of the Southern Netherlands, 2300–600 BC*. Leiden: Faculty of Archaeology, *Analecta Praehistorica Leidensia* 33/34.
- Fokkens, H. 1997. From barrows to urnfields: economic crisis or ideological change? *Antiquity* 71, 360–373.
- Frankenstein, S. and Rowlands, M.J. 1978. The internal structure and regional context of Early Iron Age society in south-western Germany, *Bulletin of the Institute of Archaeology, University of London* 15, 73–112.
- Gelling, P.S. 1970. The South Barrule hill-fort reconsidered, *Journal of the Manx Museum* 7, No. 86, 145–147.
- Gerritsen, F.A. 2003. *Local Identities. Landscape and Community in the late prehistoric Meuse–Demer–Scheldt Region*. Amsterdam: Amsterdam Archaeological Studies 9.
- Gransar, F. 2000. Le stockage alimentaire sur les établissements ruraux de l'âge du Fer en France Septentrionale: complémentarité des structures et tendances évolutives, in Marion and Blancquaert 2000, 277–297.
- Gwilt, A. and Haselgrove, C. (eds) 1997. *Reconstructing Iron Age Societies*. Oxford: Oxbow Monograph 71.
- Harbison, P. 1988. *Pre-Christian Ireland: From the First Settlers to the Early Celts*. London: Thames and Hudson.
- Halliday, S. 1999. Hut circle settlements in the Scottish landscape, *Northern Archaeology* 18, 49–66.
- Harding, D.W. 1974. *The Iron Age in Lowland Britain*. London: Routledge and Kegan Paul.
- Harding, D.W. 2004. *The Iron Age in Northern Britain: Celts and Romans, Natives and Invaders*. London: Routledge.
- Harding, D.W., Blake, I.M. and Reynolds, P.J. 1993. *An Iron Age Settlement in Dorset*. Edinburgh: University of Edinburgh Department of

Archaeology Monograph 1.

- Haselgrove, C. 1989. The later Iron Age in southern Britain and beyond, in M. Todd (ed.), *Research on Roman Britain 1960–89*, 1–18. London: Britannia Monograph 11.
- Haselgrove, C. 1997. Iron Age brooch deposition and chronology, in Gwilt and Haselgrove 1997, 51–72.
- Haselgrove, C. 1999. Iron Age societies in central Britain: retrospect and prospect, in Bevan 1999, 253–278.
- Haselgrove, C. 2001. Iron Age Britain and its European setting, in J.R. Collis (ed.), *Society and Settlement in Iron Age Europe (Actes du XVIII^e Colloque de l'AFEAF, Winchester)*, 37–72. Sheffield: Sheffield Archaeological Monograph 11.
- Haselgrove, C. 2002a. The later Bronze Age and the Iron Age in the lowlands, in C. Brooks, R. Daniels, and A. Harding (eds), *Past, Present and Future: the Archaeology of Northern England*, 49–69. Durham: Architectural and Archaeological Society of Durham and Northumberland Research Report 5.
- Haselgrove, C. 2002b. Contacts between Britain and the Continent during the Iron Age, in A. Lang and V. Salac (eds), *Fernkontakte in der Eisenzeit*, 282–297. Prague: Archäologisches Institut der Akademie der Wissenschaften der Tschechischen Republik.
- Haselgrove, C. and Lowther, P. 2005. Bâtiment, enclos cultuel ou structure funéraire? Un petit enclos carré de La Tène C2 à Soupir, l.d. “Le Parc” (Aisne), in G. Auxiette and F. Malrain (eds), *Hommages à Claudine Pommepuy*, 355–370. Amiens: Revue Archéologique de Picardie Numéro Spécial 22.
- Haselgrove, C., Armit, I., Champion, T., Creighton, J., Gwilt, A., Hill, J.D., Hunter, F. and Woodward, A. 2001. *Understanding the British Iron Age: An Agenda for Action*. Salisbury: Wessex Archaeology.
- Haselgrove, C. and Moore, T. (eds) 2007. *The Later Iron Age in Britain and Beyond*. Oxford: Oxbow Books.
- Hawkes, C.F.C. 1930. The earliest Iron Age culture of Britain, in C.F.C. Hawkes, J.N.L. Myres and C.G. Stevens, *St. Catherine's Hill, Winchester (Proceedings of the Hampshire Field Club 11)*, 140–161.
- Hawkes, C.F.C. 1931. Hillforts, *Antiquity* 5, 60–97.
- Hawkes, C.F.C. 1959. The ABC of the British Iron Age, *Antiquity* 33, 170–182.
- Hawkes, S.C. 1994. Longbridge Deverill Cow Down, Wiltshire, House 3: a major roundhouse of the Early Iron Age, *Oxford Journal of Archaeology* 13, 49–70.
- Herity, M. and Eogan, G. 1977. *Ireland in Prehistory*. London: Routledge.

- Hill, J.D. 1995a. The pre-Roman Iron Age in Britain and Ireland (c. 800 BC to AD 100): an overview, *Journal of World Prehistory* 9 (1), 47–98.
- Hill, J.D. 1995b. *Ritual and Rubbish in the Iron Age of Wessex*. Oxford: British Archaeological Reports British Series 242.
- Hill, J.D. 2002. Not just about the potter's wheel. Making, using and depositing Middle and Late Iron Age pottery in south-east England, in A. Woodward and J.D. Hill (eds), *Prehistoric Britain, the Ceramic Basis*, 143–160. Oxford: Oxbow Books.
- Hingley, R. 1992. Society in Scotland from 700 BC to AD 200, *Proceedings of the Society of Antiquaries of Scotland* 122, 7–53.
- Hodson, F.R. 1962. Some pottery from Eastbourne, the 'Marnians' and the pre-Roman Iron Age in southern England, *Proceedings of the Prehistoric Society* 28, 140–155.
- Hodson, F.R. 1964. Cultural groupings within the British pre-Roman Iron Age, *Proceedings of the Prehistoric Society* 30, 99–110.
- Hughes, G. 1994. Old Oswestry Hillfort: excavations by W.J. Varley 1939–1940, *Archaeologia Cambrensis* 143, 46–91.
- Humphrey, J. (ed.) 2003. *Re-searching the Iron Age*. Leicester: Leicester Archaeology Monograph 11.
- Jahier, I., Besnard-Vauterin, C., Lepaumier, H., *et al.* 2000. Les bâtiments des habitats de l'âge du fer en Basse-Normandie: panorama des découvertes, in Marion and Blancquaert 2000, 339–357.
- Kelly, R.S. 1988. Two late prehistoric circular enclosures near Harlech, Gwynedd, *Proceedings of the Prehistoric Society* 54, 101–151.
- Kenyon, K. 1952. A survey of the evidence concerning the chronology and origins of Iron Age A in southern and midland Britain, *University of London Institute of Archaeology Report* 8, 29–78.
- Kristiansen, K. 1998. *Europe Before History*. Cambridge: Cambridge University Press.
- Lodwick, M. and Gwilt, A. 2004. Cauldrons and consumption: Llanmaes and Llyn Fawr, *Archaeology in Wales* 44, 77–81.
- Lodwick, M. and Gwilt, A. forthcoming. Llanmaes, *Archaeology in Wales* 45.
- Marion, S. and Blancquaert, G. (eds) 2000. *Les installations agricoles de l'âge du Fer en France septentrionale*. Paris: Etudes d'histoire et d'archéologie 6.
- Maxwell, G.S. 1967–8. Excavations at Drumcarrow, Fife: an Iron Age unenclosed settlement, *Proceedings of the Society of Antiquaries of Scotland* 100, 100–108.
- Milcent, P.-Y. 2004. *Le premier âge du Fer en France centrale*. Paris: Société Préhistorique Française Mémoire 34.
- Moore, T. 2003. Rectangular houses in the British Iron Age? – “Squaring the circle”, in Humphrey 2003, 47–58.

- Moore, T. 2007. Life on the edge? Exchange, community, and identity in the Later Iron Age of the Severn–Cotswolds, in Haselgrove and Moore 2007, 41–61.
- Musson, C.R. 1991. *The Breiddin Hillfort: a Later Prehistoric Settlement in the Welsh Marches*. London: Council for British Archaeology Research Report 76.
- Needham, S.P. 1990. *The Petters Late Bronze Age Metalwork: an Analytical Study of Thames Valley Metalworking in a Settlement Context*. London: British Museum Occasional Paper 70.
- Needham, S.P. 1996. Chronology and periodisation in the British Bronze Age, in K. Randsborg (ed.), *Absolute Chronology: Archaeological Europe 2500–500 BC*, 121–140. Copenhagen: Acta Archaeologica 67.
- Needham, S.P., Spence, T., Serjeantson, D. and Sørensen, M.L.S. 1996. Formation and Late Bronze Age activity in Area 16 East, in S.P. Needham and T. Spence, *Refuse and Disposal at Area 16 East, Runnymede (Runnymede Bridge Research Excavations 2)*, 232–248. London: British Museum Press.
- Needham, S., Ramsey, C.B., Coombs, D., Cartwright, C. and Pettitt, P. 1997. An independent chronology for British Bronze Age metalwork: the results of the Oxford Radiocarbon Accelerator programme, *Archaeological Journal* 154, 55–107.
- Northover, P. 1988. The late Bronze Age metalwork: general discussion, in B. Cunliffe, *Mount Batten, Plymouth*, 75–85. Oxford: Oxford University Committee for Archaeology Monograph 26.
- O'Connor, B. 1980. *Cross-Channel Relations in the Later Bronze Age*. Oxford: British Archaeological Reports International Series 91.
- O'Kelly, M. 1989. *Early Ireland: an Introduction to Irish Prehistory*. Cambridge: Cambridge University Press.
- Owen, O.A. 1992. Eildon Hill North, in J.S. Rideout, O.A. Owen, and E. Halpin, *Hillforts of Southern Scotland*, 21–71. Edinburgh: AOC Scotland Ltd Monograph 1.
- Pare, C.F.E. 1999. Beiträge zum Übergang von der Bronzezeit zur Eisenzeit in Mitteleuropa. Teil II: Grundzüge der Chronologie in westlichen Mitteleuropa (11.–8. Jahrhundert v. Chr.), *Jahrbuch des Römisch-Germanischen Zentralmuseums Mainz* 46, 175–315.
- Parker Pearson, M. 1999. Food, sex and death: Cosmologies in the British Iron Age with particular reference to East Yorkshire, *Cambridge Archaeological Journal* 9 (1), 43–69.
- Peake, H.J.E. 1922. *The Bronze Age and the Celtic World*. London: Benn.
- Phillips, T. and Bradley, R. Developer-funded fieldwork in Scotland, 1999–2003: an overview of the prehistoric evidence, *Proceedings of the Society of Antiquaries of Scotland* 134, 17–51.

- Piggott, C.M. 1947–8. Excavations at Hownam Rings, Roxburghshire, 1948, *Proceedings of the Society of Antiquaries of Scotland* 82, 193–225.
- Piggott, S. 1966. A scheme for the Scottish Iron Age, in A.L.F. Rivet (ed.), *The Iron Age in Northern Britain*, 1–16. Edinburgh: Edinburgh University Press.
- Pommepuy, C. 1996. Les objets en pierre, in F. Malrain, F. Gransar, V. Matterne and I. Le Goff, *Une ferme gauloise de La Tène D1 et sa nécropole: Jaux “ Le Camp du Roi ” (Oise)*, *Revue Archéologique de Picardie* 3/4, 280–281 (245–306).
- Pope, R.E. 2003a. *Prehistoric Dwelling: Circular Structures in North and Central Britain c. 2500 BC – AD 500*. Unpublished Ph.D. thesis, University of Durham.
- Pope, R.E. 2003b. A functional ceramics analysis and its application in later Iron Age Dorset, in Humphrey 2003, 1–9.
- Raftery, B. 1994. *Pagan Celtic Ireland: the Enigma of the Irish Iron Age*. London: Thames and Hudson.
- Ralston, I.B.M. 1979. The Iron Age: northern Britain, in J.V.S. Megaw and D.D.A. Simpson (eds), *Introduction to British Prehistory*, 446–501. Leicester: Leicester University Press.
- Roberts, I., Burgess, A. and Berg, D. (eds) 2001. *A new link to the Past. The Archaeological Landscape of the M1–A1 Link Road*. Wakefield: Yorkshire Archaeology 7.
- Roymans, N. 1996. The sword or the plough. Regional dynamics in the Romanisation of Belgic Gaul and the Rhineland area, in N. Roymans (ed.), *From the Sword to the Plough. Three Studies on the Earliest Romanisation of Northern Gaul*, 9–126. Amsterdam: Amsterdam Archaeological Studies 1.
- Savory, H.N. 1971. *Excavations at Dinorben, 1965–9*. Cardiff: National Museum of Wales.
- Sharples, N. 1998. Houses: building power relationships. Paper presented to the Prehistoric Society conference, *At the end of the Bronze Age*.
- Smith, M.A. 1959. Some Somerset hoards and their place in the Bronze Age of southern Britain, *Proceedings of the Prehistoric Society* 25, 144–187.
- Smith, R.A. 1925. *A Guide to the Antiquities of the Early Iron Age in the Department of British and Medieval Antiquities*. London: British Museum.
- Smith, R.A. 1927. Park Brow, the finds and foreign parallels, *Archaeologia* 76, 14–29.
- Smith, R.A. 1928. Pre-Roman remains at Scarborough, *Archaeologia* 77, 179–200.
- Sørensen, M.L.S. and Thomas, R. (eds) 1989. *The Bronze Age–Iron Age Transition in Europe: Aspects of Continuity and Change in European*

Societies, c. 1200–500 BC. Oxford: British Archaeological Reports International Series 483.

Thomas, R. 1989. The Bronze–Iron transition in southern England, in Sørensen and Thomas 1989, 263–286.

Waddell, J. 1998. *The Prehistoric Archaeology of Ireland*. Galway: University Press.

Wandsnider, L. 1997. The roasted and the boiled: food consumption and heat treatment with special emphasis on pit-hearth cooking, *Journal of Anthropological Archaeology* 16 (1), 1–48.

Wheeler, R.E.M. 1935. The excavation of Maiden Castle, Dorset. First Interim Report, *Antiquaries Journal* 15, 265–275.

Willis, S.H. 2006. The Later Bronze Age and Iron Age, in N. Cooper (ed.), *The Archaeology of the East Midlands: an Archaeological Resource Assessment and Research Agenda*, 89–136. Leicester: Leicester Archaeology Monograph 13.

The character of Late Bronze Age settlement in southern Britain

Joanna Brück

Introduction

The British Late Bronze Age sees important changes in the nature and character of the settlement record. As yet, these changes are relatively poorly understood and have not formed a focus for sustained discussion (a rare exception being Needham 1992). In this paper, I shall review our current knowledge of this material and outline some primary research questions. This study does not set out to answer those questions, but will, I hope, go some way towards pinpointing the principal characteristics of Late Bronze Age settlement.

My research to date has focused primarily on Middle Bronze Age settlements (Brück 1997; 1999). Here, however, I shall be particularly concerned with identifying the changes that occur at the start of the Late Bronze Age. Following Needham (1996a), we might describe the Late Bronze Age as beginning c. 1150 BC with the appearance of Wilburton/Wallington metal-work and post-Deverel-Rimbury 'plainwares'. The end of the period is more difficult to define. As other contributions to this volume make clear, there are considerable elements of continuity between the Late Bronze Age and Early Iron Age, in terms of settlement at least, and one might argue that retaining this chronological framework is not particularly helpful.

I have chosen here to cover the period up to c. 600 BC, including the full time-span of post-Deverel-Rimbury 'decorated wares' and final Bronze Age Llyn Fawr metalwork. This time-span covers what many writers term the Earliest Iron Age (800–600 BC; Cunliffe

1984, 13); again, the ambivalence in the phraseology used in much of the literature indicates the degree of continuity and overlap in terms of site types and material culture between the two periods. My decision not to include any later sites was largely a matter of convenience – partly as a means of defining the limits of the study, and partly because I am not sufficiently familiar with post-600 BC settlement to comment fully on its relationship to the earlier material. Hopefully, a focus on the ‘Late Bronze Age’ as defined here might allow archaeologists to identify similarities and differences between these sites and those of the classic Early Iron Age.

This study is based on a sample of 68 Late Bronze Age settlements. I have by no means attempted an exhaustive study of settlements from the period, as the expansion of the contract archaeology sector over the past few decades means that many hundreds of Late Bronze Age settlements are now known. The study is based primarily on a literature survey (59 of the sites are published in journals and/or monographs), with a small number of unpublished excavations also included. Because of the history of archaeological research in Britain, the literature is heavily biased towards southern England, and the findings of the following study are most relevant to that geographical area. There is a clear need for a full review of unpublished excavations of Late Bronze Age settlements undertaken within the framework of contract archaeology; such a review would considerably expand the database of known Late Bronze Age settlements and would substantially redress the regional imbalance in terms of our knowledge base. Such a review lies outside the scope of the present study, but should form a primary aim for future research on the topic.

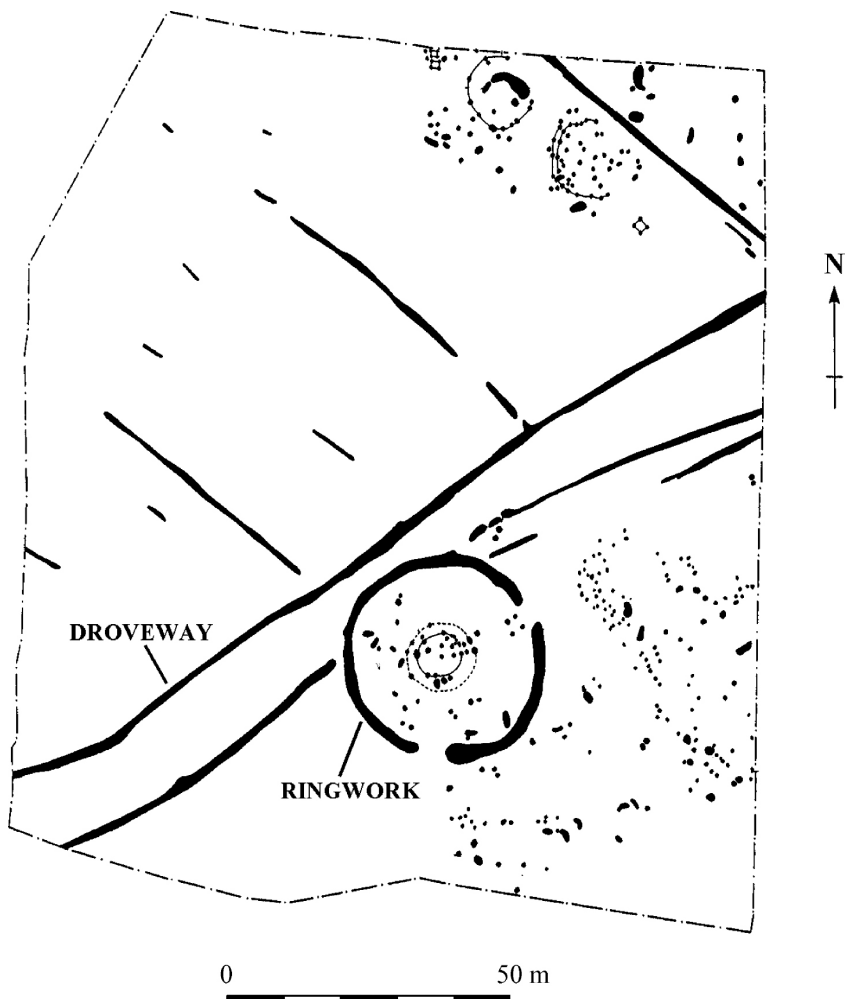


Fig. 1. The ringwork and droveway at South Hornchurch, Essex (after Guttman and Last 2000, fig. 2).

The 68 sites reviewed include 17 hillforts, 11 ringworks (sites such as Thwing, Humberside, and Springfield Lyons, Essex, which have also been termed ringforts), 11 other enclosed settlements, four midden sites, two timber platforms in marsh/wetland contexts and 28 open settlements.¹ This selection has been chosen at random, and there was no particular aim to include greater or lesser numbers of specific types of site. The definition of 'settlement' here is very broad; some of these categories of site could be defined in

other ways, for example as ceremonial centres. Nonetheless, it is useful to include them in order to be able to comment on Late Bronze Age settlement patterns at a general level. Discussion will focus on a series of themes that I would identify as central to an understanding of the character of Late Bronze Age settlement.

Diversification and categorisation

The Late Bronze Age sees a marked increase in the range of identifiable settlement types. In order to contextualise this process, however, we might first briefly characterise settlements of the preceding Middle Bronze Age. Middle Bronze Age settlements in southern Britain are relatively uniform in terms of morphology, comprising clusters of two to five roundhouses accompanied by ponds, granaries and storage pits (Ellison 1981; Brück 1999). 54% of Middle Bronze Age sites considered as part of a previous study were set within small simple enclosures (Brück 1997, fig. 6.3), while 46% were unenclosed. Such sites can be characterised as the material remains of individual households, probably comprising single family groups, practising mixed farming and engaging in small-scale inter-household exchange of goods, labour and marriage partners (Ellison 1981).

This type of settlement is also present during the Late Bronze Age, for example at Furze Platt in Berkshire (Lobb 1980) or Broomfield in Essex (Atkinson 1995). However, the Late Bronze Age also sees the appearance of a range of other site types, including ringworks (Fig. 1), early hillforts and hilltop enclosures, midden sites and timber platforms in wetland contexts. Sites in the latter category begin to appear during the Middle Bronze Age but are more characteristic of the Late Bronze Age. What this diversification of site types indicates is an important question. Many archaeologists would read this as evidence for the emergence of a settlement hierarchy, a possibility that we will discuss further below. What can be said at this point is that the proliferation of site types indicates a growing concern to differentiate certain arenas of practice. Interestingly, the proportion of overtly enclosed sites (58%) to unenclosed sites (42%) is little changed from the preceding period, despite the appearance of hillforts and ringworks.

An interest in categorisation and differentiation is also evident in

the material culture recovered from Late Bronze Age sites. Middle Bronze Age settlements produce a relatively restricted and uniform set of objects; there is little to distinguish one site from another in terms of the types of finds recovered or the quantities (Brück 1997). There are no identifiable categories of 'rich' sites during this period, unlike the Late Bronze Age when certain settlements produce extremely large numbers of artefacts. Midden sites such as Potterne in Wiltshire (Lawson 2000) and Runnymede in Surrey (Longley 1980; Needham 1991; Needham and Spence 1996) are obvious examples.

Moreover, the range of items found on Late Bronze Age settlements is much wider, with the appearance of types of object that are rare or unknown from Middle Bronze Age contexts, including briquetage, worked bone and antler, items of amber, glass and shale, and perforated clay slabs. Worked bone in particular provides a good example. My Ph.D. research on Middle Bronze Age settlements in southern England demonstrated that 87% of settlements from which worked bone was recovered yielded only bone points/awls (Brück 1997). The worked bone inventories from Late Bronze Age sites tend to be more diverse, including objects such as knives, gouges, combs, pins, handles, toggles, pendants, buttons, burnishers and chisels (Fig. 2). In total, 68% of Late Bronze Age settlements from which worked bone was recovered produced bone artefacts of more than one type.

Metalwork is more regularly found on Late Bronze Age settlements (43% of sites) than those of the previous period (33% of sites). 55% of Middle Bronze Age sites from which bronzes were recovered produced more than one category of item. By comparison, this was the case for 76% of Late Bronze Age settlements at which bronze objects were found. Again, the range of types is considerably wider during the later period, with small craft workers' tools being particularly well represented.

This diversification of object types implies that conceptual boundaries were being drawn around particular activities, or that previously undifferentiated groups of practices were being broken down into more closely defined categories of activity. We might therefore suggest that a desire to classify and define different activities coincided with an increasing concern to distinguish

different categories of person (cf. Barrett 1989, 312). Barrett (*ibid.*) makes similar comments in relation to the appearance of more diverse forms of tableware, including decorated pottery and ceramic forms unknown in the Middle Bronze Age, such as bowls and cups. He suggests that the ceramics of the Late Bronze Age allowed social differences to be expressed and maintained during both everyday meals and on special occasions. The appearance of items such as cups indicates a change from communal to individualised eating practices, again suggesting an increasing concern with processes of social differentiation (although it is of course possible that apparently novel forms of ceramic artefact had previously been made using organic materials such as wood or leather).

Scale

As mentioned above, Middle Bronze Age settlements generally appear to have been occupied by small numbers of people – probably single households or family groups. The same can be said for the majority of Late Bronze Age sites, including most open settlements, ringworks and other small enclosed settlements. Large sites that may have had an element of communal use are not in evidence during the Middle Bronze Age. However, in the case of some Late Bronze Age settlements, there is a considerable increase in the scale of the community using the site. Midden sites are a well-known example. Although these may have had a small, permanently resident population, it is likely that large numbers of people congregated at these sites for particular events, perhaps on a seasonal basis (McOmish 1996; Needham *et al.* 1996, 246; Lawson *et al.* 2000).

Work at Runnymede, Surrey, shows that materials were brought to the site from a wide area (Longley 1980; Needham and Bimson 1988; Needham 1991; Needham and Spence 1996). For example, the pottery was made from a much wider variety of clay sources than are present at contemporary settlements in the local region (Needham 1991, 163). The faunal remains indicate that feasting was an important activity, suggesting that festivals and other major social and ritual events may have drawn people to Runnymede (Done 1980; 1991; Serjeantson 1996; this volume). There was an unusually high proportion of pig bone, with evidence for the

roasting of large joints of pork, whilst sheep seem often to have been cooked as whole carcasses. The high percentage of bowls and cups present, particularly in the early layers of Area 16 East, also points to the importance of large-scale food consumption at the site (Needham *et al.* 1996, 239).



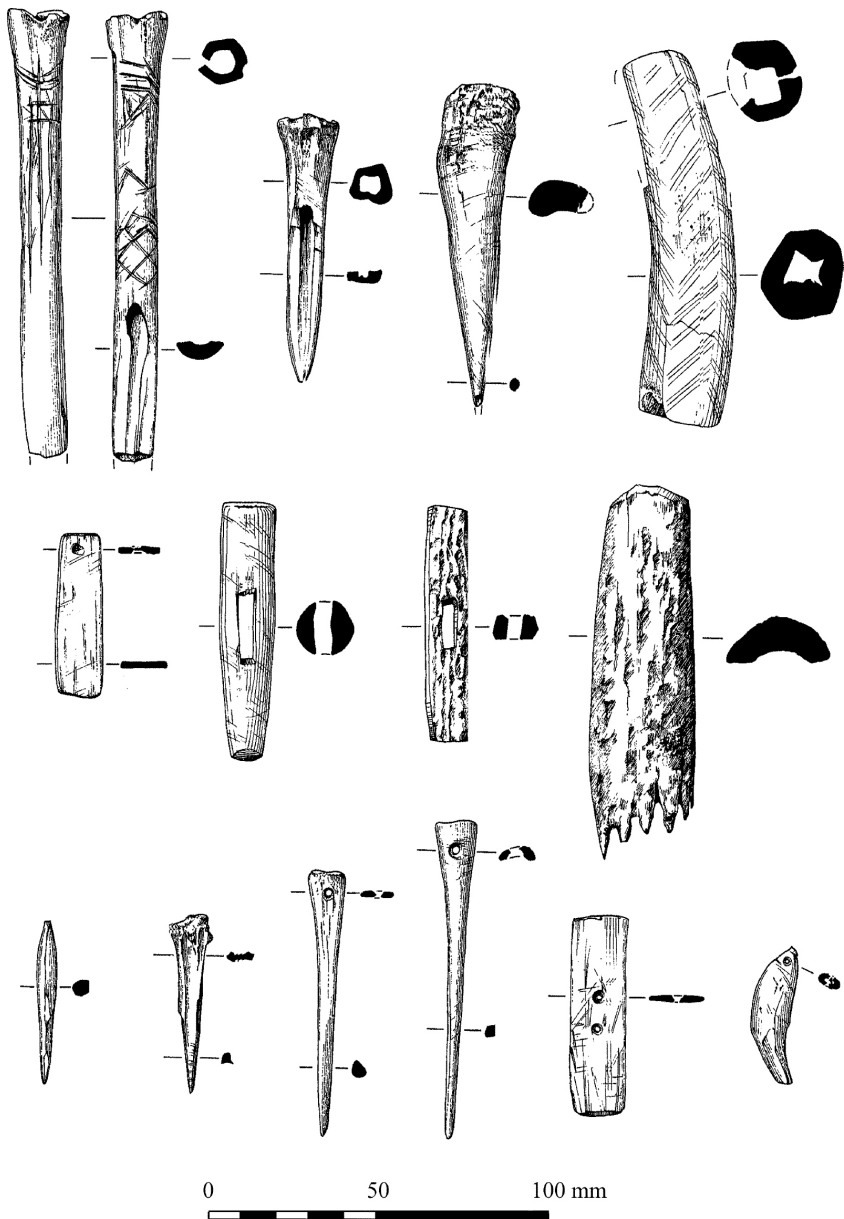


Fig. 2. A selection of bone artefacts from Potterne, Wiltshire (after Seager Smith 2000, figs 89, 90, 92, 93 and 94).

Similar results have been forthcoming from the excavation of other midden sites. For example, McOmish (1996) suggests that the

huge midden at East Chisenbury in Wiltshire was the result of a relatively small number of punctuated episodes of feasting; the sherds recovered tend to be large and unabraded. If so, then a considerable number of people may have congregated at this location for each such event. The context and possible role of such large-scale acts of consumption will be considered further below.

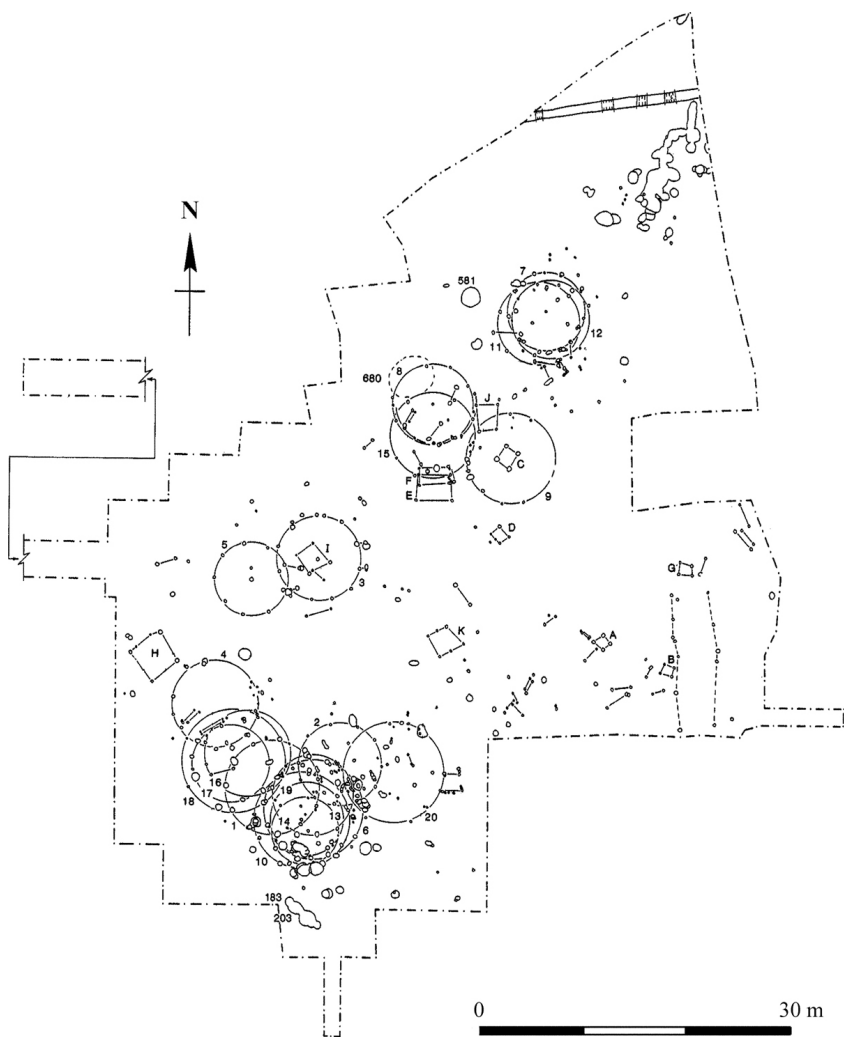


Fig. 3. Area 5, Reading Business Park, Berkshire (after Moore and Jennings 1992, fig. 9).

Many of the early hilltop enclosures may have served a similar

purpose as foci for regular community gatherings (e.g. Hill 1996, 109). This conclusion is not reached from the finds from these sites, which tend to be sparser and less diverse than those from middens, but from the large size of many early hillforts and the considerable labour input that would have been required to build them. The construction of local and regional identity through large-scale communal building projects is certainly one element that differentiates this period from the preceding Middle Bronze Age. At the Breiddin, Powys, the wandering line of the earliest rampart may indicate gang-working (Musson 1991, 176); if so, this hillfort may have been a place where a number of small local groups gathered together for communal activities, one of which was the building of the site itself. Community use of certain sites may also be indicated by the presence of multiple entrances to facilitate access.

For example, the enclosed settlements at Staple Howe, North Yorkshire (period 1; Brewster 1963), and Springfield Lyons, Essex (Buckley and Hedges 1987), are much smaller in scale than the hillforts of the period, but were equipped with four and six entrances respectively, perhaps suggesting that people normally resident elsewhere in the local area sometimes congregated at these sites.

Longevity

Middle Bronze Age settlements were relatively short-lived, with little evidence of rebuilding of houses or recutting of enclosure ditches. I have suggested elsewhere a pattern of generational shifting of residence where new settlements were established on marriage, occupied for several decades and then abandoned, perhaps on the death of the household head (Brück 1999; see also Gerritsen this volume). Many Late Bronze Age sites seem to follow this pattern. The buildings at Lofts Farm, Essex, had only one or two posts replaced (Brown 1988, 258), suggesting that a long sequence of occupation is unlikely. Similarly, at Springfield Lyons in the same county (Buckley and Hedges 1987), the enclosure ditch was a single phase feature with no evidence of recutting. The site at Kemerton, Worcestershire, where a series of roundhouses were found scattered across a field system, provides a good example of how the focus of settlement may have shifted generation by generation within a

defined area (Jackson and Naptham 1998). The buildings at this site were not generally renovated or rebuilt, indicating that they are unlikely to have remained standing over a long period. At Shorncliffe, Gloucestershire, the low level of finds and the lack of intercutting features indicates relatively short-term non-intensive settlement (Hearne and Heaton 1994); again the focus of settlement at this site shifted over time, covering an area of c. 8 hectares.

By comparison, sites such as Reading Business Park, Berkshire (Moore and Jennings 1992), and Eldon's Seat, Dorset (Cunliffe and Phillipson 1968), provide a quite different picture, with roundhouses continuously reconstructed on much the same spot. In Area 5 at Reading Business Park, for example, several of the roundhouses were rebuilt, in some cases a number of times (Fig. 3). In Area III, the ditch terminals on either side of an entrance into a U-shaped enclosure were recut repeatedly. The roundhouse at West Harling site II, Norfolk, was also completely rebuilt (Clark and Fell 1953), whilst the enclosure ditch at Broomfield, Essex, was recut three times (Atkinson 1995). The timbers of the porch of House 4 at Longbridge Deverill in Wiltshire were replaced many times (Chadwick 1961); this is interesting, given the possible symbolic significance of porch structures (Parker Pearson and Richards 1994; Hill 1996). This indicates the development of at least two different ways of relating to place, with long-term attachment to particular locations expressed only at certain sites (cf. Chadwick Hawkes 1994). Clearly, there may be important implications here for patterns of land tenure; we might consider deliberate rebuilding of a house on exactly the same location to be a way of maintaining a sense of continuity with the past and ensuring continued rights of ownership (Bailey 1999).

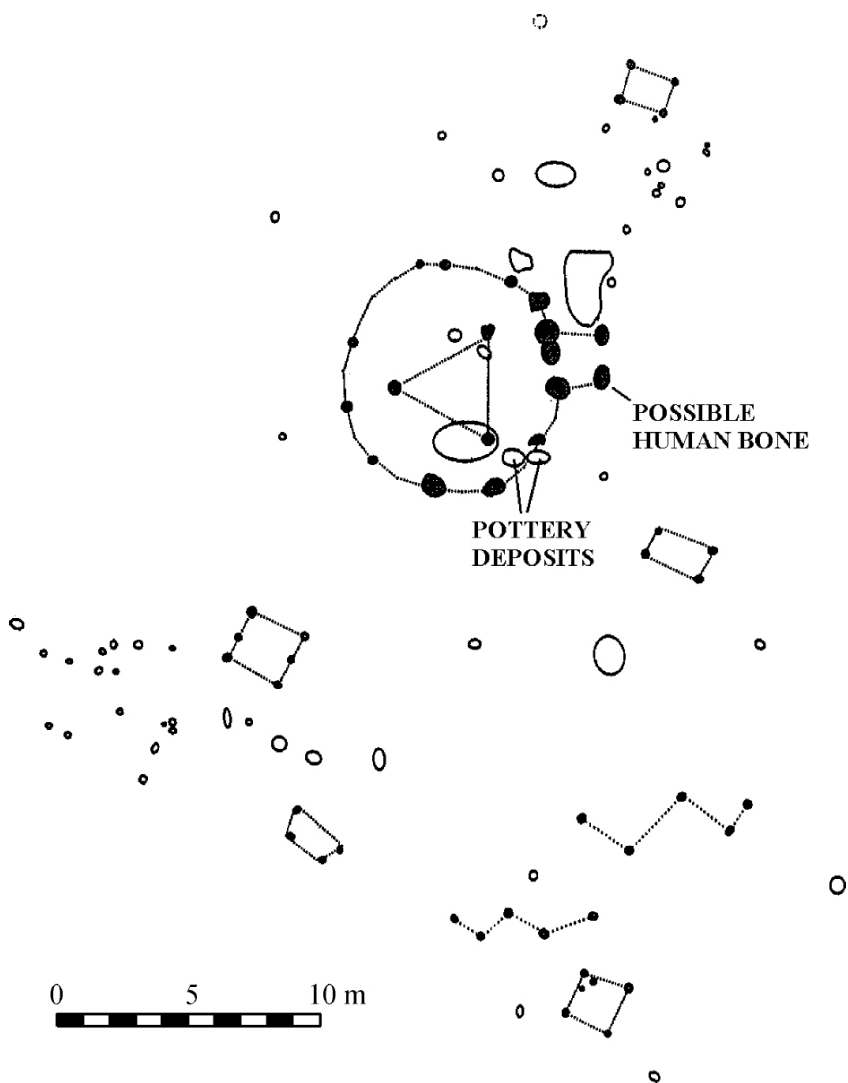


Fig. 4. The roundhouse with nearby structures at Broom Quarry, Bedfordshire (after Mortimer and McFadyen 1999, fig. 4).

I have argued elsewhere that patterns of abandonment and rebuilding may have been linked directly to the human life course (Brück 1999; 2001a; cf. also Gerritsen this volume). The site at Broom Quarry, Bedfordshire (Mortimer and McFadyen 1999), provides an interesting insight into such processes. Here, a roundhouse associated with several small ancillary structures was

uncovered (Fig. 4). The roundhouse was a single-phase structure, with no evidence for replacement of posts. On abandonment, the building was partly dismantled. A deposit of burnt bone (possibly human) was placed in one of the porch postholes after the post had been withdrawn, infusing the moment of abandonment with connotations of death. Two pits, cut towards the end of the sequence, produced a considerable quantity of pottery. Parts of 14–15 different vessels were present, including coarsewares and finewares in a range of sizes and forms. This deposit may represent the deliberate destruction of the household's inventory of pottery at the end of its life. Macpherson-Grant (1994, 277) and Brown (1995, 14) have drawn attention to similar 'leave-taking deposits' of ceramics at sites in Kent and Essex. Brown (*ibid.*) points out that such deposits often include a high proportion of fine, decorated jars and bowls, perhaps hinting at a final ritualised act of commensality before abandonment.

Elsewhere, houses sometimes seem to have been deliberately burnt or dismantled. At Mucking North Ring, Essex, a concentration of burnt clay in the upper fill of the Period II ditch at the eastern entrance (Bond 1988) might indicate a deliberate act of decommissioning – in this case, by firing and demolishing one or more of the site's roundhouses. One roundhouse at Runnymede, Surrey (F31), seems to have been burnt and demolished (Longley 1980, 7), while House 4 at Longbridge Deverill, Wiltshire, was also destroyed by fire (Chadwick 1961; Chadwick Hawkes 1994). The houses at Aldermaston Wharf in Berkshire appear to have been dismantled; all of the posts were removed from the postholes on abandonment of the site (Bradley *et al.* 1980). We might interpret the overt similarities between such rites of abandonment and contemporary funerary practices which involved the fragmentation, burning and dispersal of the human body as an indication that the death of the house was linked with the death of one or more of its occupants (Brück 1995; 2001a). If so, then patterns of abandonment and rebuilding may be the material expression of the generational cycle of domestic groups; the act of reconstruction may itself have been a visual statement of inheritance.

I would, however, suggest that other temporal cycles may also have been important, in particular those relating to the farming

year. The importance of stock herding in the Late Bronze Age economy will be discussed below, but we might note here that it is likely that certain parts of the landscape, such as river floodplains, were not occupied year-round but provided seasonal grazing grounds. For example, the settlement at Kemerton, Worcestershire (Jackson and Napham 1998) was located in an area of damp pasture on low-lying river gravels, a likely area of summer grazing for cattle. It may be that the buildings at such sites were reconstructed each year, either on the same location or elsewhere in the immediate vicinity. Importantly, the very act of rebuilding could help to re-establish and maintain seasonal grazing rights.

Turning to other categories of Late Bronze Age site, it is evident that certain types of place attracted repeated attention in a way that others did not. Midden sites, for example, indicate the repeated use of a particular location, often over several centuries. Hillforts can be seen as monumental expressions of attachment to place. Whilst there is little to suggest that many early hillforts in southern Britain were permanently occupied (Cunliffe 1991, 346–8; Hamilton and Manley 2001), most of them provide evidence for several phases of use, indicating that they were repeatedly visited, sometimes over hundreds of years. For example, the earliest bank and ditch at Balksbury, Hampshire, were constructed around 1000–900 BC, and the site continued in use through the Late Bronze Age and Early Iron Age, possibly as late as 400 BC (Wainwright and Davies 1994). There is evidence for ‘pre-rampart’ occupation of some sites during the Late Bronze Age (Cunliffe 1966; 1990). Budbury, Wiltshire (Wainwright 1970), and the Breiddin, Powys (Musson 1991), for example, are thought to have had early unenclosed phases, whilst pre-hillfort palisaded enclosures have been tentatively identified at Dinorben, Clwyd (Guilbert 1979, 183), and Harrow Hill, Sussex (Holleyman 1937).

Several authors have commented on the location of hillforts at places with evidence for earlier activity in the form of monuments such as round barrows and causewayed enclosures (e.g. Bowden and McOmish 1989; Gosden and Lock 1998; this volume; Hamilton and Manley 2001). For example, there are round barrows in the interior of Mam Tor, Derbyshire (Coombs and Thompson 1979), although such apparent associations could be coincidental. In a few

cases, however, a clear relationship can be established. The entrance to Thundersbarrow Hill in Sussex faces directly onto an earlier barrow (Hamilton and Manley 2001, 13), suggesting that the latter monument was considered significant in some way. At other sites, artefacts provide evidence for use prior to the Late Bronze Age: Norton Fitzwarren in Somerset (Langmaid 1971), for example, produced Early and Middle Bronze Age pottery, while a hoard of four looped palstaves was found at Harting Beacon in Sussex (Bedwin 1978). Such evidence suggests that it might not have been the hillfort itself that was the primary focus of interest, but the place at which it was located (cf. Bradley 2000). This could help to explain finds such as the Parc-y-Meirch hoard, Clwyd. This collection of Late Bronze Age horse fittings was found at the foot of the craggy promontory on which Dinorben hillfort was built (Savory 1971). Like watery places, this landscape feature may have had a significance in culture and mythology that drew people here to deposit votive offerings and engage in other activities, including the building of the hillfort itself.

The possible significance of episodes of rebuilding at such sites has also been a focus of interest (e.g. Bowden and McOmish 1987; Hamilton and Manley 2001). There is a strong sense of periodicity to the use of early hillforts, and visits to these sites often seem to have involved the rebuilding of ramparts and redigging of ditches. Perhaps more telling is the fact that individual phases of use sometimes seem to have ended with the refilling of ditches and the burning of ramparts (cf. Bowden and McOmish 1987). At Grimthorpe in Yorkshire, for example, a thick layer of loosely packed chalk low in the ditch silts by the entrance to the site may indicate that the rampart was deliberately destroyed not long after it was built (Stead 1968, 152). The timber framing of the first rampart at the Breiddin, Powys, appears to have been burnt (Musson 1991, 177) as were parts of the rampart at Figsbury, Wiltshire (Cunnington 1925). The rampart at the latter site indicated at least two acts of burning, one before a phase of rampart enlargement and one after.

We might interpret such acts as essentially similar to the continuous rebuilding and deliberate destruction of roundhouses. These were event-marking practices, delineating specific phases in

the life of the hillfort; acts of destruction might even have been overtly linked to the death of a significant member of the community. Alternatively, such practices may have been linked into broader seasonal cycles of movement around the landscape that involved the regular occupation, abandonment and reoccupation of places that were closely tied in to the identity of the local community. One way or the other, rebuilding was a way of expressing a sense of continuity with the past, of reinscribing tradition onto the cultural landscape – although such ‘traditions’ were probably far from static.

Conspicuous consumption

Even as roundhouses were built, ditches dug and ramparts erected, so too the very act of building allowed the construction of identity. Seasonality, age and gender are all likely to have figured strongly in shaping building activities, with those working together expressing and maintaining common bonds that at other times of the year may have been cross-cut by the requirements of different tasks. Rather than seeing construction as a form of labour service undertaken for an elite group, we might suggest that it was a way for a household or community to signal the extent to which they could call on their neighbours for support. Reciprocal labour arrangements are important in many societies. Such links can be drawn on to provide material and social support, providing those who are well-connected with considerable advantages in both the economic and the political sphere. One might say this was a ‘culture of building’: in the same way that successful Renaissance men had to be seen to be building houses, parks and gardens (Johnson 2000), constant programmes of construction during the Late Bronze Age signalled the success and well-being of an individual, family or community.

Such large-scale building projects required considerable quantities of labour and raw materials. The deliberate and often highly visual destruction of roundhouses, levelling of ramparts and refilling of ditches is therefore all the more striking. This can perhaps most usefully be compared with the conspicuous consumption of bronze objects during the period. The deposition of metalwork in wet places and the deliberate bending and breaking of bronze artefacts prior to deposition are remarkably similar acts to

the burning of a roundhouse; these are sacrifices that ultimately underline the wealth of the community that sanctions them (Kristiansen 1978; Bradley 1990).

Conspicuous consumption of both goods and labour is also in evidence at midden sites. Here, large-scale feasting activities, along with the use and deposition of copious quantities of ceramics, tools and high-status items, indicate the availability and use of considerable resources (McOmish 1996; Needham *et al.* 1996, 242–8). Similarly, the scale of craft production at such sites suggests that both raw materials and labour were freely available (*ibid.*; Lawson *et al.* 2000). The refuse generated was not spread on the fields as manure, but was allowed to build up to form low mounds, which subtly changed the local topography. Such mounds provided visible evidence of excess (McOmish 1996).

Mobility

The patterns of abandonment and reoccupation outlined above need to be contextualised in terms of the seasonal cycles of movement that structured the Late Bronze Age calendar. It is widely accepted that pastoralism was an important element of the Late Bronze Age economy. Bradley (1971), Cunliffe (1971; 1984), Hamilton and Manley (1997; 2001) and others have suggested that early hillforts and hilltop enclosures played a major role in animal management, either as stock enclosures or as vantage points from which seasonal movement of herds and flocks could be observed and managed. In some parts of southern Britain, early hillforts were often intervisible (Hamilton and Manley 2001), with views from individual sites covering considerable distances. Many hillforts were sited in relation to natural routeways. The plateau enclosure at Balkerne in Hampshire, for example, is located on a low chalk spur overlooking the junction of two river valleys (Wainwright and Davies 1994). As such, early hillforts do not seem to have been intended as ‘central places’ within a local territory, but were more concerned to facilitate and structure passage through the wider landscape (Hamilton and Manley 2001).

The relationship between hillforts and linear ditches/earthworks on the chalk downs of southern Britain has been much discussed (e.g. Hawkes 1939; Bradley 1971; Cunliffe 1990; 2000). It is

generally accepted that the demarcation of blocks of land on this scale indicates an increase in the importance of pastoralism (e.g. Bradley *et al.* 1994). However, in other parts of southern Britain, land management seems to have taken a quite different form. For example, co-axial field systems, many of which may have been constructed in the Middle Bronze Age, continued in use in parts of East Anglia (e.g. Pryor 1998, chs 7–8). Throughout much of the Thames valley (Yates 1999; 2001), co-axial systems were laid out for the first time during the Late Bronze Age. Although it is likely that cereals were grown in certain areas of these landscapes, the presence of droveways, metalled surfaces, drafting gates and waterholes indicates that stock management formed an important element of the economy (Pryor 1996; 1998; Yates 1999; 2001; see also Fig. 1 above). The predominance of grassland environments in palaeoenvironmental reconstructions for the period may support these suggestions. Palaeoenvironmental information was available for 15 of the 68 sites examined for this study; the surroundings of 12 of these were dominated by pasture, two were located on heathland, and one had a mixture of disturbed ground/wasteland and arable in its immediate vicinity. Whatever the case, there is likely to have been an element of seasonality to the use of many Late Bronze Age landscapes (Pryor 1998, 93–4); sites such as Knights Farm in Berkshire (Bradley *et al.* 1980), for example, were located in areas that were waterlogged during the winter but would have provided good summer grazing.

Midden sites seem to have played a particular role in stock management and recent work has begun to reveal some of the seasonal patterns of movement into which these locations were bound. For example, the midden at Potterne in Wiltshire produced huge quantities of animal bone (Locker 2000). A large proportion of the matrix of this midden was composed of cattle dung (Macphail 2000). Bracken and hay/straw were present in considerable quantities, perhaps for use as animal bedding and winter fodder (Carruthers 2000, 83). Studies of the soil micromorphology at this site have identified soil structures characteristic of both open air pounds and roofed stables or byres (Macphail 2000). The large numbers of animals present at such sites may suggest that the flocks and herds of one or more communities were brought together at

particular times of the year. The presence of corralling or stabling facilities at Potterne might indicate that over-wintering of animals was one important activity at these sites (Lawson *et al.* 2000, 270). Stock breeding and the culling of old animals might also have been important components of late autumn or winter gatherings (*ibid.*).

On the other hand, the high proportion of foetal and neonate lambs at East Chisenbury, Wiltshire (Brown *et al.* 1994), may indicate that at least some of these gatherings took place at lambing time in the late spring. East Chisenbury's location at the junction of seven linear ditches, a double ditched avenue and a pit alignment is interesting (McOmish 1996), reflecting the pattern noted long ago by Hawkes (1939) for early hillforts (see also Cunliffe 1990). The location of middens and hillforts at what might be interpreted as the junction of several 'territories' indicates an inter-community aspect to animal management, although whether this involved the sharing of breeding stock or rights of access to grazing land, or simply ensured safe passage for animals across the land of neighbouring groups, cannot for the present be determined.

We can perhaps begin to put together a picture as follows. Summertime use of low-lying pasture or floodplain for the grazing of cattle is likely, and seems generally to have involved fairly dispersed settlement, as at Lofts Farm, Essex (Brown 1988), or Kemerton, Worcestershire (Jackson and Naptham 1998). Upland areas, such as the chalk downs, might also have provided summer grazing, probably for sheep. Gatherings at hillforts may well have taken place in the context of such activities. Sites such as Potterne or East Chisenbury perhaps acted as foci at other times of the year, for example during the winter, when over-wintering, culling and breeding of stock might have been primary activities, or in the late spring during lambing time. Such seasonal gatherings provided the context for the range of other activities (feasting and ritual, craft production, exchange and the like) that were carried out at such special places (Lawson *et al.* 2000).

Similar points can be made with regard to cereal production. While stock raising was clearly central to the Late Bronze Age economy, cereal crops were also important (e.g. Murphy 1996). However, cereals were not grown at every site. At Reading Business Park in Berkshire (Moore and Jennings 1992), the land was damp

and certain areas were seasonally waterlogged, so it is unlikely that cereals were grown in the immediate vicinity. Although barley and emmer wheat were recovered from the site, only the later stages of crop processing were represented. It is therefore probable that cereals were grown and threshed on the higher plateau gravels to the south, and the grain brought to the site in its hulls (*ibid.* 108, 122).

There are two ways of interpreting such information. We might suggest a system of local specialisation and exchange. Alternatively, the evidence for a certain degree of mobility to the settlement pattern could indicate that communities undertook activities such as crop production, stock herding, and the exploitation of marine and estuarine resources (Locock 2001) on a seasonal basis, moving from one area of the landscape to another as required. Of course, this is not to say that all settlements were seasonally occupied. At Brean Down in Somerset, for example, sheep were culled at fairly regular intervals throughout the year (Levitan 1990), suggesting that occupation of certain sites was permanent (Bell 1990, 261). Rather than whole communities moving on a regular basis, age and/or gender specific sub-community task groups could have carried out activities such as herding or salt production. Different scales of movement might also have been involved, with some activities involving short-term absence from a site (perhaps for a few hours), while others required weeks or months away. Such seasonal cycles of movement would have played a critical role in reproducing aspects of social identity (cf. Barrett 1994, 145). This is an important point, as it reminds us that the activities at sites such as hillforts might not have involved all members of a local community. Finally, the social significance of patterns of movement may have meant that the very act of moving from place to place may itself have had ritualised aspects; for example, the bridges at Eton Rowing Lake in Oxfordshire are associated with a variety of possible votive deposits, including human bone, food deposits and a new ard (Miles 1997).

Hierarchy

It is evident that different classes of site played different roles in the Late Bronze Age economy. The appearance of site types such as

ringworks, hillforts and middens has, however, also been taken to indicate the development of a settlement hierarchy. Initial interpretations of the site at Runnymede in Surrey, for example, where a structure first identified as a ‘waterfront’ was uncovered, along with exotic metalwork, amber, antler cheek pieces and other unusual items, was that this was a high-status settlement located at a point on the River Thames from which a resident elite could easily control trade to and from the Continent (Longley 1976). Similarly, the appearance of early hillforts has often been set within a social evolutionary narrative, according to which they represent the early origins of the centralised chiefdom societies postulated for the developed Iron Age (e.g. Cunliffe 1984).

Over the past two decades, however, Iron Age studies have seen considerable challenges to such established models, with particular debate surrounding the interpretation of hillforts as chiefly centres controlling production and distribution (e.g. Bowden and McOmish 1987; Stopford 1987; Hill 1996). It has long been recognised that occupation of early hillforts such as Harrow Hill, Sussex (Holleyman 1937), and the Breiddin, Powys (Buckland *et al.* 2001), was neither intensive nor continuous (Cunliffe 1991, 346–8; Hamilton and Manley 2001). The finds inventories from such sites are often similar to those from other categories of settlement (Hill 1996); the pottery and faunal assemblage from Barksbury in Hampshire (Wainwright and Davies 1994), for example, is not significantly different from smaller sites in the immediate vicinity. Needham (1992) makes some similar observations regarding ringworks. They relatively rarely produce ‘exotic’ materials, while their dense distribution across parts of the landscape of eastern and south-eastern Britain precludes their role as centres of anything larger than very small ‘territories’.

Table 1 outlines the distribution of possible ‘high-status’ finds across the different categories of site examined for this study. Evidence for the production of such objects (metalworking evidence, for example) has been specifically excluded here, and will be discussed in a later section. It can be seen that midden sites and timber platforms are most likely to produce high-status materials, followed by ringworks and hillforts, although this is only the case for some categories of item. Information on the relative quantities

of coarseware and fineware pottery was not available for many of the sites, but where it was, no clear pattern could be discerned. Some putatively 'high-status' sites such as the Breiddin, Powys, produced no finewares (Musson 1991, 119), whereas relatively high percentages of fine ceramics are sometimes found at small open settlements such as Aldermaston Wharf, Berkshire (Bradley *et al.* 1980).

Whether the presence of such objects can be taken as a straightforward indication of the status of the inhabitants of a site is less clear, however. Needham's recent work on Runnymede provides some interesting lines of thought. The putative 'waterfront structure' has now been reinterpreted as part of a palisaded enclosure surrounding the site (Needham 1991, 380). Possible hard standings for beaching boats have been identified on the adjacent river bank (*ibid.*, 91), although the shallowness and probable intermittency of the water suggests that this area did not have a specific mooring function but was used on a more opportunistic basis (*ibid.*, 380). Needham suggests that the location of the site on the river may have had as much to do with the importance of bodies of water within Late Bronze Age ritual and religious practice as with a concern to locate the site near trade routes (*ibid.*, 393). As touched on above, the range and diversity of materials and objects from the site may indicate that large groups of people from a wide hinterland regularly congregated there (*ibid.*; Needham and Spence 1996). If so, then the material from Runnymede may be less representative of the status of elite residents than of the diverse background of those who travelled to this place. Our vision of the site therefore shifts from one of an elite centre to a community gathering-place where a variety of specialised activities were carried out, perhaps on a seasonal basis. Yet, the greater flow of materials into Runnymede than out may suggest an unequal relationship between those who visited the site for certain events and those who were permanent occupants, or perhaps who presided over those events (Needham *et al.* 1996, 247).

	<i>Middens</i>	<i>Timber platforms</i>	<i>Ringworks</i>	<i>Hillforts</i>	<i>Other enclosed settlements</i>	<i>Open settlements</i>
Total no. of sites	4	2	11	17	11	28
Bronze objects	100%	100%	55%	47%	27%	28%
>3 bronze objects	100%	100%	18%	6%	9%	7%
Shale/jet	100%	50%	18%	47%	9%	18%
Antler cheek pieces	25%	50%	0%	0%	0%	0%
Amber	50%	50%	9%	6%	9%	4%
Glass	100%	0%	0%	0%	0%	0%
Gold	25%	0%	9%	6%	0%	4%

Table 1. Percentage of sites producing 'high-status' finds.

To sum up, certain sites and those who were associated with them were clearly regarded as special in some way, though how this relates to 'status' or social position is less clear. In this regard, it is important to remember the seasonal nature of activities at sites such as middens. This suggests that rather than assuming the existence of a static hierarchy of sites and people, power and status may to some degree have shifted as roles and activities changed over the course of the annual cycle.

Craft production

To pursue inter-site differences further, we might look at the distribution of productive activities of various sorts (Table 2). Beginning with metalworking, there was evidence for this activity (in the form of mould and crucible fragments, furnace lining, copper/bronze lumps, droplets, sprues and ingots, casting jets and slag) at a quarter (24%) of the sites studied here. The presence of mould fragments alone was not taken to indicate metalworking, as freshly cast objects may have travelled in their moulds from their site of production. Looking at the different classes of site, metalworking activities were clearly concentrated at middens and ringworks; interestingly, there is relatively little evidence for metalworking at hillforts.

Perforated clay plaques are an enigmatic category of item particularly concentrated in the Thames valley, Essex and Kent. They are presumed to have had a role in a pyrotechnic activity such as pottery making, bronzeworking, or salt production (e.g. Adkins and Needham 1985, 38; Perkins *et al.* 1994, 311). It may be significant that of the 11 sites that produced perforated clay plaques and the eight that produced briquetage, only two sites yielded both

categories of item. By comparison, eight out of the 11 sites from which perforated clay plaques were recovered yielded evidence for metalworking. The primary association of perforated clay plaques is with ringworks. Turning to briquetage, the relative rarity of this material may suggest that salt was generally produced at specialist sites away from settlements – perhaps directly by the sea or at saline springs (e.g. Wilkinson and Murphy 1995). Although the presence of this material at some settlements may simply indicate the transportation of salt in briquetage containers from its place of production, the quantity and form of briquetage at sites such as Mucking North Ring in Essex (from which pedestals, augets and salt vessels were recovered; Bond 1988), indicates that salt making was certainly carried out on some settlements, predominantly ringworks and open sites.

Stone tools such as hammers or pounders, whetstones, burnishers and polishers are also most regularly recovered from midden sites and ringworks. The distribution of quernstones and rubbing stones (not shown in [Table 2](#)) was very similar to the other categories of stone tools; these might have been used either in food preparation or for craft activities (for example for grinding up burnt flint for use as pottery filler). Possible evidence for the manufacture of quernstones has been identified at a small number of sites, for instance Potterne in Wiltshire (Mephram and Lawson 2000, 242).

	<i>Middens</i>	<i>Ringworks</i>	<i>Hillforts</i>	<i>Other enclosed settlements</i>	<i>Open settlements</i>
Total no. of sites	4	11	17	11	28
Metalworking	75%	55%	12%	0%	21%
Perforated clay plaques	25%	55%	0%	9%	3%
Briquetage	0%	27%	6%	0%	14%
Ground stone tools	100%	45%	29%	18%	32%
Bone tools	100%	18%	35%	54%	18%
Loom weights	100%	64%	29%	72%	43%
Spindle whorls	100%	64%	59%	45%	25%

Table 2. Percentage of sites producing evidence for crafts or productive activities.

The presence of bone tools may be indicative of a variety of productive activities, including leather working, cloth production, woodworking and pottery making. They occur most frequently at sites on chalk and limestone; over half of the sites on chalk or

limestone produced bone tools compared with just over 10% of sites in other landscape contexts (of course, acid soils are not conducive to the preservation of bone, although it is unlikely that this factor alone can account for the substantial difference noted). This is perhaps unsurprising; we might expect stock management to have been an important component of downland economies during this period. The relative lack of bone tools at ringworks is interesting and may indicate that these sites were not directly involved in stock management, or at least were not a focus for this activity during the winter months, when the culling of older animals might primarily have taken place (but see Yates 1999).

The recovery of spindle whorls and loom weights from many of the sites studied here again underlines the importance of animal husbandry to the Late Bronze Age economy. The distribution of these items shows some interesting patterns. 50% of sites in low-lying river valley or valley side locations yielded loom weights, as did 50% of sites on higher elevations, for example on chalk downland, or on chalk, limestone or gritstone hilltops, promontories and ridges. Spindle whorls, on the other hand, were found at 31% of lower-lying sites by comparison with 61% of sites at higher elevations (cf. Miles 1997). For example, the site at Shorncliffe, Gloucestershire, produced no spindle whorls (Hearne and Heaton 1994). Given this site's location on first terrace river gravels in an area of damp pasture, this is perhaps unsurprising; such a landscape context would not be appropriate for keeping sheep. Interestingly, although weaving was regularly taking place in broadly 'upland' locations, hillforts do not seem to have been a particular focus for this activity.

The evidence for pottery production is less regularly recorded or commented on in site reports, making it impossible to quantify the relative proportions of different types of site at which this activity was carried out. A few sites have provided considerable evidence for the manufacture of ceramics. Runnymede, for example, produced a deposit of clean clay and a cache of finely crushed burnt flint, which may have been intended as raw materials for pottery production (Needham 1996b). Possible tools were also present in the form of stone grinders/pounders (for the preparation of the clay and the flint temper) and bone points and burnishers. A large burnt

clay spread may indicate the location of a firing site, while a possible waster might again provide evidence for on-site production (*ibid.*).

Pottery production also took place at small open settlements, for example at Weston Wood, Surrey, where a large number of pottery wasters was found (Harding 1964), and Combe Hay, Somerset, where a possible clamp kiln and dumps of raw clay were identified (Price and Watts 1980, 13). Pottery fabrics at most sites tend to indicate local production (these include sites of such different types as the Breiddin: Musson 1991, 177; Potterne: Morris 2000, 146; Shorncote: Morris 1994; and Combe Hay: Barrett 1980), and it may be that this activity was carried out at a small-scale level on most settlements. However, the more intensive and larger scale of production noted at some sites may indicate the start of a process of specialisation that continued into the Iron Age (Morris 2000, 149; Seager Thomas 2001).

The appearance of ovens, kilns and furnaces on a number of Late Bronze Age settlements, for example Mucking North Ring, Essex (Bond 1988, 19), Eldon's Seat, Dorset (Cunliffe and Phillipson 1968), and the Breiddin, Powys (Musson 1991), is interesting, given the lack of such structures on Middle Bronze Age sites. Possible kiln or oven furniture (other than perforated clay plaques) has also been identified, for example the fragment of a clay pedestal from Potterne in Wiltshire (Hall 2000). Although it is not always possible to identify the specific tasks for which these structures were built, their appearance indicates a significant change in the technologies surrounding a range of heat-mediated transformative activities. The provision of special facilities for particular activities may relate to the growing concern to distinguish different areas of practice noted above.

Finally, evidence for the production of jet or shale items seems largely to be concentrated near to the sources of these materials, for example at Eldon's Seat in Dorset (Rule 1968) and Thwing in Humberside (Manby 1980). Items found further afield tend to be finished, although semi-finished 'blanks' for the production of bracelets and other items are occasionally found, for example at Brean Down in Somerset (Foster 1990). As Wyles (2000) has noted, the number of items recovered decreases extremely fast with

distance from the source. While hundreds of pieces of shale have been found at sites such as Hengistbury Head, Dorset (Cunliffe 1987, 338), it is rare for settlements further afield to produce more than one or two such items; only the midden sites have more than this. Although we saw above that finished shale or jet items were more regularly found at hillforts than at other types of site, evidence for production is spread fairly evenly among the various different classes of site in the vicinity of the sources.

To sum up, middens and ringworks were without doubt particular foci for craft activities. Needham *et al.* (1996, 247) point out that carrying out craft production in the context of large seasonal gatherings at middens would have allowed the pooling of labour, expertise and raw materials across what might otherwise have been quite dispersed communities. It is therefore particularly interesting to compare such sites with ringworks, which are likely to have been the settlements of single household groups. On the one hand, craft production was undertaken at community gathering places where knowledge could be shared and exchange might allow access to different goods or materials. On the other hand, productive activities at ringworks could be more carefully controlled in terms of personal involvement and access, perhaps suggesting that certain groups in society were more closely associated with such activities than others. Whether and how this might relate to social status or site hierarchy is unclear; as we have seen, the evidence for production so abundant at ringworks is not always matched by the presence of exotic materials. Whatever the case, it is clear that differential involvement and task-specific roles in craft production would have been one of the main ways in which age, gender and other aspects of social identity were defined during this period.

Conclusion

At least some of the patterns described in this paper had changed by the end of the Latest Bronze Age/Earliest Iron Age. For example, some of the types of site discussed here were no longer used or built in the developed Iron Age. Midden sites seem to fall out of use by c. 600 BC (Lawson *et al.* 2000, 271–2), while ringworks seem largely to have been current during the tenth and ninth centuries BC. In the Thames valley, co-axial field systems were no longer constructed or

maintained during the Early Iron Age (Yates 2001; Bradley and Yates this volume). Such developments may imply changes to patterns of animal management, the restructuring of local political and/or territorial units, or shifts in the way in which status was expressed (Yates 2001). Yet, at the same time, there were considerable elements of continuity into the Early Iron Age. However, for the moment, these must remain a focus for future research.

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Note

1. Note that this list of sites totals more than 68. This is because some sites include several enclosures, or an enclosed settlement plus neighbouring open settlement, which may or may not be contemporary.

Bibliography

- Adkins, L. and Needham, S. 1985. New research on a late Bronze Age enclosure at Queen Mary's Hospital, Carshalton, *Surrey Archaeological Collections* 76, 11–50.
- Atkinson, M. 1995. A late Bronze Age enclosure at Broomfield, Chelmsford, *Essex Archaeology and History* 26, 1–24.
- Bailey, D. 1999. What is a tell? Settlement in fifth millennium Bulgaria, in J. Brück and M. Goodman (eds), *Making Places in the Prehistoric World: Themes in Settlement Archaeology*, 94–111. London: UCL Press.
- Barrett, J. 1980. The prehistoric pottery, in R. Price and L. Watts, Rescue excavations at Combe Hay, Somerset, 1968–1973, *Somerset Archaeology and Natural History* 124, 25–27.
- Barrett, J. 1989. Food, gender and metal: questions of social reproduction, in M.L.S. Sørensen and R. Thomas (eds), *The Bronze Age–Iron Age Transition in Europe*, 304–320. Oxford: British Archaeological Reports International Series 483.
- Barrett, J. 1994. *Fragments from Antiquity: an Archaeology of Social Life in Britain, 2900–1200 BC*. Oxford: Blackwell.
- Bedwin, O. 1978. Excavations inside Harting Beacon hill-fort, 1976, *Sussex Archaeological Collections* 116, 225–240.

- Bell, M. 1990. *Brean Down Excavations 1983–1987*. London: English Heritage Archaeological Report 15.
- Bond, D. 1988. *Excavation at the North Ring, Mucking, Essex*. Chelmsford: East Anglian Archaeology Report 43.
- Bowden, M. and McOmish, D. 1987. Little boxes: more about hillforts, *Scottish Archaeological Review* 6, 12–16.
- Bowden, M. and McOmish, D. 1989. The required barrier, *Scottish Archaeological Review* 4, 76–84.
- Bradley, R. 1971. Stock-raising and the origins of hillforts on the South Downs, *Antiquaries Journal* 51, 8–29.
- Bradley, R. 1990. *The Passage of Arms: an Archaeological Analysis of Prehistoric Hoards and Votive Deposits*. Cambridge: Cambridge University Press.
- Bradley, R. 2000. *An Archaeology of Natural Places*. London: Routledge.
- Bradley, R., Entwistle, R. and Raymond, F. 1994. *Prehistoric Land Divisions on Salisbury Plain: the Work of the Wessex Linear Ditches Project*. London: English Heritage Archaeological Report 2.
- Bradley, R., Lobb, S., Richards, J. and Robinson, M. 1980. Two Late Bronze Age settlements on the Kennet gravels: excavations at Aldermaston Wharf and Knight's Farm, Burghfield, Berkshire, *Proceedings of the Prehistoric Society* 46, 217–295.
- Brewster, T.C.M. 1963. *The Excavation of Staple Howe*. Wintringham: East Riding Archaeological Research Committee.
- Brown, G., Field, D. and McOmish, D. 1994. East Chisenbury midden complex, in Fitzpatrick and Morris 1994, 46–49.
- Brown, N. 1988. A Late Bronze Age enclosure at Lofts Farm, Essex, *Proceedings of the Prehistoric Society* 54, 249–302.
- Brown, N. 1995. Prehistoric pottery, in M. Atkinson, A Late Bronze Age enclosure at Broomfield, Chelmsford, *Essex Archaeology and History* 26, 8–14.
- Brück, J. 1995. A place for the dead: the role of human remains in the Late Bronze Age, *Proceedings of the Prehistoric Society* 61, 245–277.
- Brück, J. 1997. *The Early–Middle Bronze Age Transition in Wessex, Sussex and the Thames Valley*. Unpublished Ph.D. thesis, University of Cambridge.
- Brück, J. 1999. Houses, lifecycles and deposition on Middle Bronze Age settlements in southern England, *Proceedings of the Prehistoric Society* 65, 1–22.
- Brück, J. 2001a. Body metaphors and technologies of transformation in the English Middle and Late Bronze Age, in Brück 2001b, 65– 82.
- Brück, J. (ed.) 2001b. *Bronze Age Landscapes: Tradition and Transformation*, 65–82. Oxford: Oxbow Books.

- Buckland, P., Parker Pearson, M., Wigley, A. and Girling, M. 2001. Is there anybody out there? A reconsideration of the environmental evidence from the Breiddin hillfort, Powys, Wales, *Antiquaries Journal* 81, 51–76.
- Buckley, D. G. and Hedges, J. D. 1987. *The Bronze Age and Saxon Settlements at Springfield Lyons, Essex: an interim report*. Chelmsford: Essex County Council Occasional Paper 5.
- Carruthers, W. 2000. Mineralised plant remains, in Lawson 2000, 73–84.
- Chadwick, S. 1961. Longbridge Deverill, Cow Down, Wiltshire ST887145, *Proceedings of the Prehistoric Society* 27, 346–347.
- Chadwick Hawkes, S. 1994. Longbridge Deverill Cow Down, Wiltshire, House 3: a major round house of the Early Iron Age, *Oxford Journal of Archaeology* 13(1), 49–69.
- Clark, J. G. D. and Fell, C. 1953. The Early Iron Age site at Micklemoor Hill, West Harling, Norfolk, and its pottery, *Proceedings of the Prehistoric Society* 19, 1–40.
- Coombs, D. and Thompson, F. 1979. Excavation of the hill fort at Mam Tor, Derbyshire, 1965–69, *Derbyshire Archaeological Journal* 99, 7–51.
- Cunliffe, B. 1966. Stoke Clump, Hollingbury and the Early Pre-Roman Iron Age in Sussex, *Sussex Archaeological Collections* 104, 109–120.
- Cunliffe, B. 1971. Aspects of hillforts and their cultural environments, in M. Jesson and D. Hill (eds), *The Iron Age and its Hillforts*, 53–70. Southampton: University of Southampton.
- Cunliffe, B. 1984. Iron Age Wessex: continuity and change, in B. Cunliffe and D. Miles (eds), *Aspects of the Iron Age in Central Southern Britain*, 12–44. Oxford: Oxford University Committee for Archaeology Monograph 2.
- Cunliffe, B. 1987. *Hengistbury Head, Dorset, Vol. 1: The Prehistoric and Roman Settlement, 3500 BC–AD 500*. Oxford: Oxford University Committee for Archaeology Monograph 13.
- Cunliffe, B. 1990. Before hillforts, *Oxford Journal of Archaeology* 9, 323–336.
- Cunliffe, B. 1991. *Iron Age Communities in Britain*. London: Routledge and Kegan Paul.
- Cunliffe, B. 2000. *The Danebury Environs Programme. The Prehistory of a Wessex Landscape, Vol. 1. Introduction*. Oxford: Oxford University Committee for Archaeology Monograph 48.
- Cunliffe, B. and Phillipson, D. 1968. Excavations at Eldon's Seat, Encombe, Dorset, *Proceedings of the Prehistoric Society* 34, 191–237.
- Cunnington, M.E. 1925. Figsbury Rings: an account of excavations in 1924, *Wiltshire Archaeological Magazine* 43, 48–58.
- Done, G. 1980. The animal bone, in Longley 1980, 74–79.
- Done, G. 1991. The animal bone, in Needham 1991, 327–342.

- Ellison, A. 1981. Towards a socioeconomic model for the Middle Bronze Age in southern England, in I. Hodder, G. Isaac and N. Hammond (eds), *Pattern of the Past: Studies in Honour of David Clarke*, 413–438. Cambridge: Cambridge University Press.
- Fitzpatrick, A.P. and Morris, E.L. (eds) 1994. *The Iron Age in Wessex: Recent Work*. Salisbury: Trust for Wessex Archaeology.
- Foster, J. 1990. Other Bronze Age artefacts, in Bell 1990, 158–175.
- Gosden, C. and Lock, G. 1998. Prehistoric histories, *World Archaeology* 31, 2–12.
- Guilbert, G. 1979. Dinorben 1977–8, *Current Archaeology* 65, 182–188.
- Guttman, E.B.A. and Last, J. 2000. A Late Bronze Age landscape at South Hornchurch, Essex, *Proceedings of the Prehistoric Society* 66, 319–359.
- Hall, K. 2000. Fired clay objects, in Lawson 2000, 140–149.
- Hamilton, S. and Manley, J. 1997. Points of view: prominent enclosures in 1st millennium BC Sussex, *Sussex Archaeological Collections* 135, 93–112.
- Hamilton, S. and Manley, J. 2001. Hillforts, monumentality and place: a chronological and topographic review of first millennium BC hillforts in south-east England, *European Journal of Archaeology* 4(1), 7–42.
- Harding, J.M. 1964. Interim report on the excavation of a Late Bronze Age homestead in Weston Wood, Albury, Surrey, *Surrey Archaeological Collections* 61, 10–17.
- Hawkes, C.F.C. 1939. Excavations at Quarley Hill, 1938, *Proceedings of the Hampshire Field Club* 14, 136–194.
- Hearne, C.M. and Heaton, M.J. 1994. Excavations at a Late Bronze Age settlement in the Upper Thames Valley at Shorncliffe Quarry near Cirencester, 1992, *Transactions of the Bristol and Gloucestershire Archaeological Society* 112, 17–57.
- Hill, J.D. 1996. Hill-forts and the Iron Age of Wessex, in T.C. Champion and J.R. Collis (eds), *The Iron Age of Britain and Ireland: Recent Trends*, 95–116. Sheffield: J.R. Collis Publications.
- Holleyman, G. 1937. Harrow Hill excavations, 1936, *Sussex Archaeological Collections* 78, 230–251.
- Jackson, R. and Naptham, M. 1998. Interim report in salvage recording of a Neolithic/Beaker and Bronze Age settlement and landscape at Huntsmans Quarry, Kemerton, 1996–7, *Transactions of the Worcestershire Archaeological Society* 16, 57–68.
- Johnson, M. 2000. Self-made men and the staging of agency, in M.-A. Dobres and J. Robb (eds), *Agency in Archaeology*, 213–231. London: Routledge.
- Kristiansen, K. 1978. The consumption of wealth in Bronze Age Denmark, in K. Kristiansen and C. Paludan-Müller (eds), *New Directions on*

- Scandinavian Archaeology*, 158–190. Lyngby: National Museum of Denmark.
- Langmaid, N. 1971. Norton Fitzwarren, *Current Archaeology* 28, 116–120.
- Lawson, A. 2000. *Potterne 1982–5: Animal Husbandry in Later Prehistoric Wiltshire*. Salisbury: Wessex Archaeology Report 17.
- Lawson, A., Powell, A. and Thomas, R. 2000. Discussion, in Lawson 2000, 251–272.
- Levitan, B. 1990. The vertebrate remains, in Bell 1990, 220–241.
- Lobb, S. 1980. The excavation of a Late Bronze Age settlement at Furze Platt, Berkshire, *Berkshire Archaeological Journal* 70, 9–17.
- Locker, A. 2000. Animal bone, in Lawson 2000, 101–119.
- Locock, M. 2001. A Later Bronze Age landscape on the Avon levels: settlement, shelters and saltmarsh at Cabot Park, in Brück 2001b, 121–128.
- Longley, D. 1976. Excavations on the site of a Late Bronze Age settlement at Runnymede Bridge, Egham (Surrey), *London Archaeology* 3, 10–17.
- Longley, D. 1980. *Runnymede Bridge 1976: Excavations on the Site of a Late Bronze Age Settlement*. Guildford: Research Volume of the Surrey Archaeological Society 6.
- Macphail, R.I. 2000. Soils and microstratigraphy: a soil micromorphological and micro-chemical approach, in Lawson 2000, 47–71.
- Macpherson-Grant, N. 1994. The pottery, in Perkins *et al.* 1994, 248–288.
- Manby, T. 1980. Bronze Age settlement in Eastern Yorkshire, in J.C. Barrett and R.J. Bradley (eds), *Settlement and Society in the British Later Bronze Age*, 307–370. Oxford: British Archaeological Reports British Series 83.
- McOmish, D. 1996. East Chisenbury: ritual and rubbish at the British Bronze Age–Iron Age transition, *Antiquity* 70, 68–76.
- Mephram, L. and Lawson, A. 2000. Overview of the artefactual assemblage, in Lawson 2000, 240–247.
- Miles, D. 1997. Conflict and complexity: the later prehistory of the Oxford region, *Oxoniensia* 62, 1–19.
- Moore, J. and Jennings, D. 1992. *Reading Business Park: a Bronze Age Landscape*. Oxford: Oxford University Committee for Archaeology/Oxford Archaeological Unit.
- Morris, E.L. 1994. Pottery, in Hearne and Heaton 1994, 34–43.
- Morris, E.L. 2000. Fabrics, in Lawson 2000, 140–149.
- Mortimer, R. and McFadyen, L. 1999. *Investigation of the Archaeological Landscape at Broom, Bedfordshire: phase 4*. Cambridge: Cambridge Archaeological Unit Report 320.
- Murphy, P. 1996. Environmental archaeology, in O. Bedwin (ed.), *The Archaeology of Essex: Proceedings of the 1993 Writtle conference*, 168–

180. Chelmsford: Essex County Council.

- Musson, C. 1991. *The Breiddin Hillfort: a Later Prehistoric Settlement in the Welsh Marches*. London: Council for British Archaeology Research Report 76.
- Needham, S. 1991. *Excavation and Salvage at Runnymede Bridge, 1978: the Late Bronze Age Waterfront Site*. London: British Museum Press.
- Needham, S. 1992. The structure of settlement and ritual in the Late Bronze Age of south-east Britain, in C. Mordant and A. Richard (eds), *L'habitat et l'occupation du sol à l'âge du bronze en Europe*, 49–69. Paris: Editions du Comité des Travaux historiques et scientifiques.
- Needham, S. 1996a. Chronology and periodisation in the British Bronze Age, *Acta Archaeologica* 67, 121–140.
- Needham, S. 1996b. Pottery production evidence, in Needham and Spence 1996, 162–164.
- Needham, S. and Bimson, M. 1988. Late Bronze Age Egyptian blue at Runnymede, *Antiquaries Journal* 68, 314–315.
- Needham, S. and Spence, T. 1996. *Refuse and Disposal at Area 16 East, Runnymede*. London: British Museum Press.
- Needham, S., Spence, T., Serjeantson, D. and Sørensen, M.L.S. 1996. Formation and Late Bronze Age activity in Area 16 East, in Needham and Spence 1996, 232–248.
- Parker Pearson, M. and Richards, C. 1994. Architecture and order: spatial representation and archaeology, in M. Parker Pearson and C. Richards (eds), *Architecture and Order: Approaches to Social Space*, 38–72. London: Routledge.
- Perkins D.R.J., Macpherson-Grant, N. and Healey, E. 1994. Monkton Court Farm evaluation, 1992, *Archaeologia Cantiana* 114, 237–316.
- Price, R. and Watts, L. 1980. Rescue excavations at Combe Hay, Somerset, 1968–1973, *Somerset Archaeology and Natural History* 124, 1–49.
- Pryor, F. 1996. Sheep, stockyards and farm systems: Bronze Age livestock populations in the Fenlands of eastern England, *Antiquity* 70, 313–324.
- Pryor, F. 1998. *Farmers in Prehistoric Britain*. Stroud: Tempus.
- Rule, M. 1968. The shale, in B. Cunliffe and D. Phillipson, Excavations at Eldon's Seat, Encombe, Dorset, *Proceedings of the Prehistoric Society* 34, 225–226.
- Savory, H. N. 1971. A Welsh Bronze Age hillfort, *Antiquity* 45, 251– 261.
- Seager Smith, R. 2000. Worked bone and antler, in Lawson 2000, 222– 240.
- Seager Thomas, M. 2001. Two early first millennium BC wells at Selsey, West Sussex, and their wider significance, *Antiquaries Journal* 81, 14–50.
- Serjeantson, D. 1996. The animal bones, in Needham and Spence 1996, 195–223.

- Stead, I. M. 1968. An Iron Age hillfort at Grimthorpe, Yorkshire, England, *Proceedings of the Prehistoric Society* 34, 148–190.
- Stopford, J. 1987. Danebury: an alternative view, *Scottish Archaeological Review* 4, 70–75.
- Wainwright, G. J. 1970. An Iron Age promontory fort at Budbury, Bradford-on-Avon, Wiltshire, *Wiltshire Archaeological Magazine* 65, 108–166.
- Wainwright, G.J. and Davies, S.M. 1994. Balksbury Camp, Andover, Hampshire, in Fitzpatrick and Morris 1994, 42–57.
- Wilkinson, T. and Murphy, P. 1995. *The Archaeology of the Essex Coast, Vol. 1. The Hullbridge Survey*. Chelmsford: East Anglian Archaeology Report 71.
- Wyles, S. 2000. Shale and jet, in Lawson 2000, 208–213.
- Yates, D. 1999. Bronze Age field systems in the Thames Valley, *Oxford Journal of Archaeology* 18, 157–170.
- Yates, D. 2001. Bronze Age agricultural intensification in the Thames Valley and Estuary, in Brück 2001b, 65–82.

800 BC, The Great Divide

Stuart Needham

Understanding the Bronze Age to Iron Age transition in lowland Britain is plagued by two problems. The first concerns the very different conceptual frameworks in parallel use by different researchers. There seems to be little common ground on the underlying framework of developing material culture and landscape evidence, let alone on the terminologies applied. With this intellectual background it becomes very difficult to evaluate differences of interpretation. The second problem is the prevailing assumption that the transition saw considerable continuity, and that the transition is consequently just one in name rather than in substance. Transitions of one kind or another are a perpetual feature of human history and so it must be asked, can the bronze-iron transition be seen to involve a more profound change in material culture, social attitudes and social structure?

From the point of view of metal technology alone, major change is an inevitable consequence of the very different distributions of the raw materials involved, and the different methods needed to convert them into artefacts. While the newly adopted metal, iron, did require the mastery of new skills and a certain amount of reorganisation of labour and exchange networks (Kristiansen 1998, 211), those factors do not in themselves tell us that society had changed radically in other respects. Taking account of the broader cultural evidence, the prevailing view for the past two decades or more has been one of considerable continuity across the Late Bronze Age/Early Iron Age boundary. The change in the primary metal base and the attendant organisational changes have been tacitly accepted as relatively inconsequential.

This approach, however, is perverse in that it takes little account

of the parallel interpretation of the social roles of the respective metals, in particular the view that bronze was central to the workings of Bronze Age society in many ways (Pare 2000); for many researchers now, bronze is interpreted as a kind of socio-political currency. It has been widely appreciated for some time that understanding the bronze-iron transition has little to do with technological advance *per se*; that in varied ways, according to individual regional responses, it was determined by socio-economic and political factors (Sørensen and Thomas 1989, *passim*; Kristiansen 1998, 211). But if this reconstruction of the social economy is tenable, then how can we ignore the possibility that collapse of the *bronze standard*, which supported the social value system of the Late Bronze Age, would have caused substantial restructuring of the political order? Some form of direct substitution for bronze could perhaps have mitigated political disruption, but no straightforward substitution is evident.

This debate is further complicated by recent developments on the chronologies of the Late Bronze Age and Earliest Iron Age in Britain, which have significantly shifted the absolute date for the 'transition' from bronze to iron-plus-bronze. Perhaps less well appreciated as yet is that the new chronological framework results in some realignment of different cultural aspects, which affects our characterisation of society before, during and after the transition. The purpose of this paper is to assess the nature and implications of these relative shifts for lowland Britain. It is concluded that around the turn of the ninth/eighth centuries, there were radical changes afoot in addition to the switch away from a total bronze base.

Date	Period	Pottery Assemblage	Metalworking Assemblage	Bronze use	Iron use
1250	MBA ↑	Deverel-Rimbury ↑	Penard	large stocks in circulation & substantial consumption (especially ritual)	sporadic use?
1200					
1150					
1100					
1050	LBA	Plainware	Wilburton	large-scale redundancy ⇒ 'abandonment'	iron 'adopted'
1000			Ewart-Blackmoor		
950			mature Ewart		
900					
850	Earliest Iron Age	Decorated	Llyn Fawr (bronze, plus iron)	↓ limited residuality reutilisation & recycling	low-volume circulation ↓ key roles satisfied, still lowish volume but growing
800					
750					
700					
650	Early Iron Age ↓		Hallstatt D ↓↓		
600					

Fig. 1. Proposed chronology and terminology for pottery and metalwork during the Later Bronze Age and Earliest Iron Age.

Definitions, posits, and historical background

If the periods of the Three Age System are becoming increasingly unsatisfactory as bulk descriptors (e.g. Bradley 2001), we still need labels of convenience for definable cultural entities. One tenet of this paper is that the interpreted system is of more importance than the use of bronze or iron for tools and weapons *per se*. The writer sees a measure of consistency (inevitably with interesting variations) in both the social use of metalwork and in other aspects of society in the period c. 1150–800 BC; this is, then, a cultural phenomenon usefully called the *Late Bronze Age* (Fig. 1).

The choice of a watershed date of c. 800 BC is based on the interpretation of a changed social role for metalwork combined with a range of other cultural changes (discussed below), rather than a change in the primary metal as such. As to the duration of the *transition* between the Late Bronze Age and Earliest Iron Age, the current evidence suggests that a range of critical changes took place over the century c. 850–750 BC. One feature is a dramatic reduction in the quantity of metal in circulation, more probably a

symptom of the new system than an underlying cause. The successor system did involve a modest amount of bronze metalwork, but it may be argued that iron, despite its relative archaeological invisibility, had already been adopted as a strategic metal. To say that the adoption of iron was 'strategic' does not presuppose that its role was the same as that previously held by bronze.

Although we may legitimately debate both the amount of iron in circulation and its importance to contemporary society between 800 and 600 BC, it is convenient to refer to this period in general as the *Earliest Iron Age* (I have appropriated the term introduced some years ago by Barry Cunliffe; 1991). Given the inclusion in this date bracket of the last phase of use of bronze for tools and weapons – those of the Llyn Fawr assemblage – an alternative might be to call this period the *Ultimate Bronze Age*. This is less satisfactory both because of the likely tailing off of Llyn Fawr bronzes and because of the perceived change in the role of metalwork to which I have already alluded.

The revelations of the late 1970s and 1980s that, firstly, so-called 'Early Iron Age' pottery and, secondly, some hillforts emerged in the Late Bronze Age, were the main factors to promote the assumption of a seamless passage from final Bronze Age to earliest Iron Age. In some respects this had already been foreshadowed by Hodson's elucidation that much of insular Iron Age culture had earlier roots (Hodson 1964; also Burgess 1970). With belief in prehistoric invasions increasingly suspended after Clark's (1966) review, one major cause of radical cultural transformation was squeezed out of the interpretative frame. New sites like Mucking, Runnymede and Aldermaston provided metalwork and/or radiocarbon associations to confirm the earlier origins of the pottery styles. Simultaneously, these exciting new alignments of the late 1970s gave rise to a searching reexamination of older sites and assemblages. Thus were explained away the apparent internal anachronisms at, for example, Ivinghoe Beacon and Scarborough, while Staple Howe and All Cannings Cross became more readily understood as sites founded just on the 'Bronze Age' side of the divide. These sites and others now actually demand further re-evaluation in light of the framework offered in this paper.

One of the reasons that the pottery has continued to suggest continuity may be because of the terminology applied. Although John Barrett clearly recognised that there was important change in the ceramic repertoire from an earlier 'Plainware' phase to a later 'Decorated' phase, he saw both as elements of a single, evolving tradition (Barrett 1980) which soon came to be known as *post-Deverel-Rimbury*. Interestingly, this portrayal contrasted with the terminology applied by Cunliffe (e.g. 1978) and Davies (1981). For Cunliffe the earlier, plainer tradition evolved from Deverel-Rimbury ceramics with some innovation, but otherwise much conservatism (1991, 52–4); the various decorated styles that sprang up thereafter marked a significant break and expressed strong regionality – notably All Cannings ware, West Harling-Staple Howe ware, and Caburn-Kimmeridge ware. To some extent both of these positions are correct, but this takes us back to the debate about defining 'continuity'. It would now seem more helpful for the purposes of discussion to refer to the two phases of post-Deverel-Rimbury ceramics discretely and, while not ideal, I use the terms *Plainware* and *Decorated* assemblages.

It is useful at this point to summarise succinctly the chronologies of the key material assemblages as currently understood (Fig. 2). Ewart metalwork started in its early, Blackmoor, facies late in the eleventh century BC. The use-phase of Ewart metalwork ended around 800 BC (Needham *et al.* 1997). The chronology of Llyn Fawr metalwork is based on occasional closely associated dates but also on the revised dating of Hallstatt C bronze gear on the Continent (Pare 1991; Needham *et al.* 1997, 98). It post-dates 800 BC and O'Connor (this volume) makes the case for Llyn Fawr metalwork continuing for the greater part of two centuries. However, only the Sompting hoard is at present securely dated to a late stage within this sequence. Post-Deverel-Rimbury pottery in its early Plainware phase is *broadly* coeval with Late Bronze Age metalwork in the newly defined sense (viz Wilburton/Blackmoor/Ewart), emerging around the twelfth century BC and being transformed into Decorated assemblages from the later ninth century BC onwards (Barrett 1980; Needham 1996a; Needham *et al.* forthcoming).

One major implication of the recently revised chronologies is to create less overlap between Late Bronze Age metalwork proper and

Decorated ceramics, the former having been back-dated while the latter was not (Fig. 2). This raises the question of whether their cooccurrence on sites is more frequent than would seem appropriate given the duration of overlap? Many of the critical sites in this regard are discussed below.

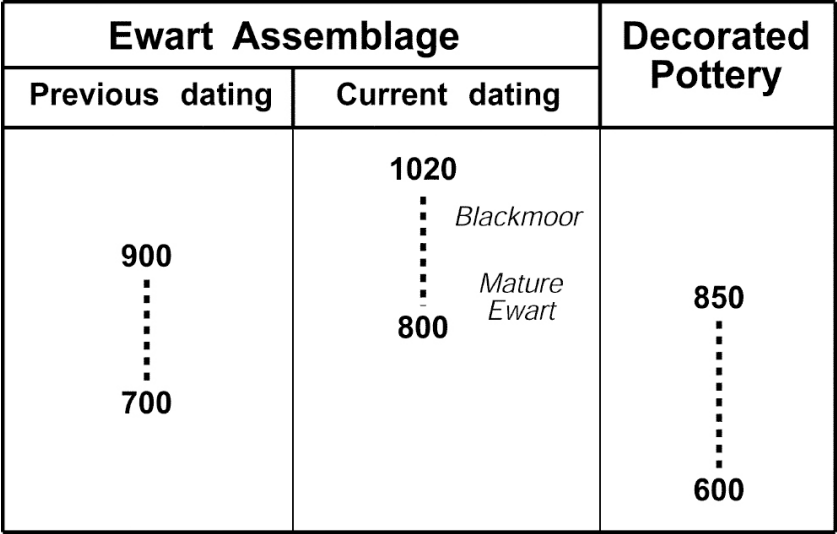


Fig. 2. Change in the chronology of Ewart metalwork relative to Decorated pottery.

Ceramic markers

It is uncontroversial that there are some crucial developments in ceramics between the Plainware assemblage and the Decorated one – as emphasised by Barrett (1980) at the outset – even if there remains disagreement over the extent to which these reflect substantial social change. It is increasingly important that we try to discern a finer chronology for these changes, which may be complex and will not necessarily have been uniform from region to region. The assumption of ‘continuity’ has probably tended to inhibit the search for refinement, yet it is vital that the ceramic sequence is tied closely to other cultural attributes including the metalwork assemblages. There is a need to develop further the careful definition of specific forms, as has been done for a number of Iron Age assemblages and fewer Late Bronze Age ones. To pursue this path is not to deny the relevance and importance of broader

classifications concerned with vessel capacities, the utility and quality of ware as exemplified by John Barrett's scheme of the late 1970s (Barrett 1980; see also, for example, Woodward 1995). The two approaches are complementary and, indeed, the recognition of subtle form change may actually contribute significantly to understanding functional variation and the social requirements of the ceramics.

It has become usual to describe a range of types appropriate to the Decorated assemblage as 'Late Bronze Age' or at least of Late Bronze Age origin. A case in point might be the neck-cordoned jars recurrent on many sites across the whole of lowland Britain. While cordoned vessels do occasionally occur in Plainware assemblages, presumably of Deverel-Rimbury derivation, cordons positioned in the neck only appear in association with a wide range of other features that define the Decorated assemblage. It may be possible in time, through careful analysis of closed groups, to isolate particular styles or features of the Decorated assemblage that appear earlier than others. Little is possible as yet, except to say that simple finger-tipping of rim tops is accepted by most researchers to be an occasional feature of Plainware before the myriad applications of finger-printing and finger-nail nicking of rim tops, rim exteriors, necks, shoulders and even bodies from the transition onwards. What is less clear is whether that early decorative device was in occasional use *throughout* the Plainware phase, or whether it emerged late, being one of the first manifestations of the new Decorated phenomenon.

The correlation of radiocarbon dates

Something needs to be said about radiocarbon dating in relation to the transition, given how many of our site chronologies depend on this method. By good fortune, radiocarbon dates are very conveniently divided by the uncalibrated date 2550 BP (with all the usual caveats about the desirability of multiple sampling, stratified sequences and high integrity contexts). *If dates were perfect*, those preceding 2550 (and back to about 2950/2900 BP) would indicate Late Bronze Age proper plus a transition – i.e. pre-760 BC. Those between 2550 and 2400 BP would signal a bracket of 810 to 400 BC, effectively the Earliest and Early Iron Ages. These fixed points

give us a useful ‘rule of thumb’ regarding high integrity radiocarbon dates.

There is of course a fundamental difference in the chronological resolution possible either side of 2550 BP, due to the radical change in the character of the calibration curve (Pearson and Stuiver 1986). For the Late Bronze Age the curve falls quite steeply and thus can offer fairly refined resolution when sampling problems are kept to a minimum. After 2550 BP, however, the curve features the notorious ‘plateau’, in actual fact a series of largely overlapping wiggles.

Resolution *within* this bracket is extremely poor whatever the integrity of the samples.

We must however be increasingly critical in our use of radiocarbon associations and not use poor contexts, such as floated charcoal, in the construction of refined chronologies. That Decorated pottery in general, and a range of specific forms in particular, were only emerging late in the ninth century BC and perhaps becoming a ‘consolidated tradition’ after the turn to the eighth century BC, cannot be sensibly challenged without tight associations with high integrity and high quality radio-carbon determinations, or with dendrochronologically dated timbers.

Site review

The following review cannot be comprehensive, but it should be representative and aims to include many of the key sites pertaining to the Late Bronze Age/Earliest Iron Age transition. Sites are discussed geographically, broadly from south-west to north-east.

The Unit 4 occupation horizon at Brean Down, on the Avon coast, has a reasonable range of pottery forms, but unfortunately two of three radiocarbon dates are far too early (probably due to animal activity; Bell 1990). Some can be accommodated within a Plainware milieu, but there is the possibility of continuation into the transition. Various convex-walled vessels dominate the assemblage, usually only with slightly inturned rims (Woodward 1990). Internal bevels are recurrent on different forms. There are also flared tubs, cylindrical buckets, varied shouldered jars and two carinated bowls.

Features that might point to a late date are the bowls – one biconical, the other more strongly tripartite than normally seen in the full Late Bronze Age – fingerprinted shoulders, diagonally

slashed rims and the possible hemispherical bowls among the convex vessels. All of these are from the dark earth deposit rather than from features under or low in the deposit. This is true also of the small number of sherds in fabrics which vary from the standard one in the assemblage. On the other hand, the sub-assemblage from the suite of 'low stratified' contexts (pot nos 67, 102–107, 109–110, ?118), although small, is characterised by bucket-like, flared and convex-walled vessels, consistently calcitegritted. There is also a broad-cordoned, thick body sherd that looks decidedly early (although possibly residual). One rim top is finger-tipped and another sherd has a row of perforations.

There is, then, a potential development identifiable stratigraphically and it may be that the dark earth is mainly of transitional date or Earliest Iron Age. Interestingly, the 'Late Bronze Age' gold bracelets, although not in themselves closely dated, are thought to have slumped from a point low in this Unit 4 sequence (Bell 1990, 69) and might well go with the early pot group.

Another useful association in south-west England comes from Norton Fitzwarren, Somerset (Ellis 1989). The site has a long history and the pottery assemblage relevant to this discussion is not large. However, in pit 16 layer 60 (cutting II) some Plainware pottery is associated with a group of clay mould fragments. The latter are identified as for casting Ewart type swords (Needham 1989); there are no early looking features in the sword matrices and so the group is now best dated to mature Ewart stage, late tenth to ninth centuries BC. Among the pottery are two convex-walled, or 'hook-rimmed' jars (nos 27–28), although in different fabrics, one anticipating the medium-distance exchange of ceramics in a particular fabric during the Iron Age (Woodward 1989). These vessels, perhaps signalling the beginnings of change in ceramic traditions locally, could tie in well with the very late Bronze Age date of the moulds, but some caution needs to be expressed about the formation process, as pit 16 also contained residual earlier pottery and a few intrusive later sherds. A larger group of diagnostic pottery from the site is attributed by Woodward to a Late Bronze Age/Early Iron Age transitional stage from the ninth/eighth centuries BC onwards (*ibid.*, 51), which would fit happily within the Earliest Iron Age bracket of this paper.

The best stratified Plainware groups at Eldon's Seat (Cunliffe and Phillipson 1968; pottery as defined in Needham *et al.* forthcoming) are associated with two new radiocarbon dates on animal bone (BM-3030: 2830 ± 50 BP; BM-3040: 2800 ± 70 BP). The form range, while not extensive, shows some of the classic developments well known in southern Britain, with some vessels displaying more obvious Deverel-Rimbury ancestry that might be more a feature of western regions. Tall, gracile convex-walled vessels with inturned mouths and probable bucket-like vessels are joined by shouldered jars, and small and large burnished carinated bowls with out-turned lips. One weak-shouldered jar has a flat-topped rim with a modest internal flange, whilst a number of rims have internal bevels and three are moderately everted club rims. Some of the bowed vessels carry oval bosses or finger-printed girth cordons, presumably both continuing earlier traditions (there is Deverel-Rimbury ware on the site). The latter form is well paralleled by two or three vessels at the Breiddin in the Welsh Marches (Musson 1991). There are no neck cordons, nor further decoration. However, the Plainware group from the IB rubble has two finger-printed rims and a weakly cabled one which seem likely to be transitional, as too might be the very thick-walled 'T' or club rims. The IB rubble is not fully understood, but is either multi-stage and potentially of broad date span, or, if of limited duration, formed late, perhaps as late as the Earliest Iron Age (Needham *et al.* forthcoming).

Two context groups were regarded as Plainware in the early campaigns of excavation on the site of a large enclosure at Barksbury, Hampshire (Wainwright and Davies 1995). One of these contexts, post hole 3464, yielded a radiocarbon date of 2800 ± 70 BP on charcoal (HAR-5127). However, occasional elements may suggest that the pottery extends towards the transition: a thickened neck jar, a rim with finger-tip decoration on its external edge and perhaps the prominent internally flanged rim (although see Eldon's Seat above).

More recent excavations at Barksbury have added further dates which confirm activity at an advanced stage of the Late Bronze Age prior to the phase I rampart being constructed: 2745 ± 50 BP and 2770 ± 50 BP (AA-27528-9) from hearth-associated charcoal, and 2645 ± 50 BP (AA-27527) from a 'trample' horizon just above the

level of the hearth (Ellis and Rawlings 2001). Mephram (2001, 49) observes that these seem to push the Plainware ceramic phase on the site fairly late, while her ceramic phase 2 of Decorated ware occurs in contexts later than the phase II rampart. The chronology of the earliest enclosure is therefore trapped between the two ceramic phases and could be very late in the Late Bronze Age, or of Earliest Iron Age date. The bronze tanged-and-collared chisel and awl from material accumulating against the rear of the third-phase rampart need not invalidate this conclusion, but might favour the idea that the whole sequence was not prolonged and close to the transition. There is also scope for re-deposition, which seems to explain the final radiocarbon date from a context under the phase III bank (Ellis and Rawlings 2001, 38). The deposits forming against the rear of the rampart are of interest in being dark, humic-rich and relatively rich in finds of burnt flint, worked flint and pottery; they had a significant component of animal manure and were discussed in relation to other 'middens' (*ibid.*, 31–3; 83; 87).

The deeply stratified sequence excavated at Potterne (Lawson 2000) is of considerable importance for a number of reasons, among them in providing a key ceramic sequence for the early first millennium BC in north Wessex. Much of the enormous quantity of pottery belongs to the regional style zone of the Earliest Iron Age – the early All Cannings Cross tradition (Morris *et al.* 2000). However, more difficult to sort out are the early phases of activity on the site and their relationship to the prolific refuse phase. In simplistic terms the *in situ* stratigraphic sequence may be split into two – a thick dark earth termed the 'Deposit' and underlying 'soils'. The clarity of the division is variable, but in the southern 'on-terrace' part of the site there was a clear distinction in character (Macphail 2000). The terrace soil here, sealed under the dark earth 'midden', has earthworm casts but is also interpreted as having been churned and organically enriched by livestock (cf. Serjeantson this volume). It probably had a colluvial component, sealed some cut features, but was cut by others. Even if there was substantial particle movement, it seems likely that this was a soil evolving *in situ* in response to a phase of livestock corralling. With no significant accretion, there is every possibility of conflation therein of materials from diverse phases.

To the north of the terrace, a scarp cut through its soil down to bedrock prior to the formation of the overlying Deposit (Lawson 2000, 20, fig. 10). This scarping is associated with a routeway traversing the excavated area. However, it is clear that some early material survived low in the 'off-terrace' stratigraphy despite the apparent erosion; whether it derived from pockets of *in situ* deposits, or was reworked early material is less certain. At the base in parts of this area was the zone 13 concreted layer and zone 14 soil below. A little above, zone 11 yielded two radiocarbon dates on mixed charcoal, but they are not in close agreement and suggest either conflation of anachronistic material in the layer, or considerable residuality (HAR-6983: 3430 ± 110 BP; HAR-6982: 3130 ± 100 BP). This is reinforced by the survival of one Peterborough and one Beaker pottery sherd in zone 13 very close to the dated samples, while two decorated pins from zone 11 are probably of final Middle Bronze Age or early Late Bronze Age date, c. 1300–1000 BC (nos 32 and 33), and a blade tip from the same zone (no 2) is likely to be from a Middle Bronze Age rapier.

Morris describes in detail the character of the pottery from the basal layers, zones 14–11 (Morris *et al.* 2000, 157–61). She notes that only a very small proportion is decorated and identifies the bulk of the assemblage as Plainware, but also notes some sherds of probable Deverel-Rimbury attribution. Chronological depth may be reinforced by occasional late sherds. For instance, the cabled rim of sherd 142 is rather unlikely to pre-date the Late Bronze Age/Earliest Iron Age transition. Zone 10, immediately above this basal assemblage, yielded a rilled sherd (126), a finger-printed shoulder (128), and a slack-shouldered jar (131), all of which seem most appropriate for a date around the transition; associated sherds are not inconsistent.

Whatever the exact formation processes, it would seem that a basal suite of deposits containing residues of wide age span and probably conflated through soil processes survived both on-terrace and off-terrace. These gave way relatively suddenly to a quite different and highly accretive formation process: the Deposit. There is no evidence for a hiatus, but the nature of activity and the rate of deposition changed dramatically. The new process was intimately tied to the appearance of the classic Decorated assemblage. No

haematite-coated sherds, for example, occur below the Deposit, but they are present from its inception.

The transition to the Deposit on the terrace is effectively marked by two hearths at its base, which have been archaeomagnetically dated to 800–650 BC (68% confidence; Clark 2000). Off-terrace, there are two radiocarbon dates from zone 7, higher in the same column as the earlier ones quoted above. Again they are on mixed charcoal and can only really be regarded as *TPQs*, but they show good agreement (HAR-6980: 2650 \pm 80 BP; HAR-6981: 2630 \pm 70 BP). They give calibrations of 1010–530 and 990–530 cal. BC (two sigma), although with a preference for pre-760 BC (one sigma). This evidence is not strong enough to place the start of the Deposit's formation, or the associated pottery assemblage, to significantly before the turn of the ninth/eighth centuries BC. Higher still, in zone 4, mixed charcoal samples gave dates of 2590 \pm 80 BP (HAR-6978) and 2490 \pm 70 BP (HAR-6979), calibrating to 920–410 and 800–410 cal. BC respectively.

It remains to consider how the copper alloy metalwork fits into the picture. Its character changed significantly through the stratigraphic sequence (Gingell *et al.* 2000, 193). Most of the more conventional Bronze Age types came from low positions, while sheet metal fragments – including a possible binding for a late (i.e. Llyn Fawr period) cauldron rim (no. 75) – dominated the higher levels. Many of the simple rings, pins, tweezers and awls may not be especially diagnostic of the Late Bronze Age (as defined here) rather than the Earliest Iron Age. Nevertheless, good Bronze Age types such as the sickle tang (no. 5), the disc-headed pin with fine flange (31), the decorated pins (32–33), and the bag-shaped chape (76) are all from the basal stratigraphic suite. Although its context is unascertainable due to recovery during grave digging, it would seem that the gold bracelet was also from near the base of the stratigraphy. On the other hand, the crescentic razor (4) and perhaps the tanged chisel with crinoline blade (7) from zone 10 are Llyn Fawr types.

A site with similarities to Potterne is East Chisenbury, in Wiltshire to the south-east (Brown *et al.* 1994). Although excavation trenches have been minute by comparison with the scale of the 'midden mound' deduced from fieldwork, they do offer a fine chronology of

the deposits at those point locations. Again, the pottery indicates a restricted time-span within the early All Cannings tradition, *between* Plainware and Scratch-Cordoned wares (Field 2001, 62). Field suggests formation over as little as a century and a linear-faceted axe and tanged chisel of Llyn Fawr date stratified at the base of the sequence in one trench confirm inception after about 800 BC (Brown *et al.* 1994, 48). Intriguing is the relationship between the mound and an oval enclosure partly obscured beneath it; whether this enclosure is entirely earlier, or is contemporary with the early stages of ‘midden’ development remains to be elucidated, but occupation evidence was found within a soil under the midden.

Another key sequence with similarities is that at Wittenham Clumps, Oxfordshire (Hingley 1978). There is the suggestion of a similar extensive dark earth deposit to those now recognised at several sites (see further below) and surviving in the excavated trenches up to 0.30 m thick. Beneath the dark earth (‘darker occupation layer’) at Wittenham Clumps, was a ‘lighter occupation layer’, presumably a soil profile enriched with occupation residues. Significantly, Hingley (*ibid.*) was able to show a marked difference in the fabric suite of the pottery from that lower layer compared to the upper one. A high proportion of flint-tempered and sand-tempered sherds, combined with the (few) diagnostic forms, allowed him to argue for a Late Bronze Age date. By contrast, the darker layer and associated features contained, for the most part, a classic Decorated assemblage featuring both key decorative elements and diagnostic morphologies. Described as Early Iron Age in that report, this would conform to the Earliest Iron Age as defined here. There is little independent dating evidence, but the upper layer in trench J yielded both an iron blade and a ring-headed pin. As at Potterne, a shift to activities that produced dark earth deposits coincided with a dramatically altered and expanded ceramic repertoire.

Wallingford, Oxfordshire, like Runnymede, has become celebrated for having yielded Late Bronze Age metalwork from occupation deposits on the banks of the Thames (Thomas *et al.* 1986), both sites probably being former eyots. The pottery from early explorations may be a mixture, but there seems to be a high proportion of developed forms. This is reinforced by the evidence

from the later excavations (Cromarty *et al.* 2006), which, moreover, illustrates a critical early phase beginning, again like Runnymede, sometime around the turn of the tenth/ninth centuries BC. There is a case to be made that the bulk of the refuse deposits surviving on the island's surface belong to a late stage of the site, arguably from the Late Bronze Age/Earliest Iron Age transition onwards. Amongst the metalwork are distinctive 'Bronze Age' types – a socketed spearhead, tanged chisel and socketed sickle – but it is not certain that all of these are of Ewart rather than Llyn Fawr date. Some small iron objects were also recovered, but have been dismissed as intrusive (Thomas *et al.* 1986, 190).

The Aldermaston/Knights Farm sites, near Reading, Berkshire, have been much referred to as typifying the post-Deverel-Rimbury sequence of lowland Britain (Bradley *et al.* 1980). The sub-sites have yielded important groups of pottery, not all of the same phase, in association with settlement structures, but there was no metalwork and very few radiocarbon dates. The Aldermaston assemblage can for the most part be taken as classic Plainware, as always recognised. Although decoration is present, it is infrequent. Occasional fingerprinting of the rim top is seen elsewhere in otherwise 'plain' assemblages. The similarly occasional spaced impressions on the wall below the rim could be a feature inherited from Deverel-Rimbury ceramics. There is only one uncertain neck cordon and one omphalos base, arguably a late Plainware feature. Rims are simple and rounded (except the few finger-printed examples) and a few feature internal bevels, among them club-like forms matching those from Eldon's Seat and Lofts Farm among other assemblages. One potentially late vessel – i.e. transitional at the earliest – is that with piecrust along the external edge of the rim from F77; there are no associations in that feature. The fairly sharply carinated vessels (nos 33 and 103) might also be part of a late group represented in F84. The Knights Farm 2 pottery matches Aldermaston closely, whereas the pottery from sub-sites 1 and 3 is Decorated and can almost entirely be attributed to the transition and Earliest Iron Age. Both these later sites each have a single radiocarbon date (neither of good integrity) which is consistent with the cultural attribution.

It has been argued that the pottery from Pingewood, in the same

area, represents material bridging the transition from Deverel-Rimbury to Plainware (Bradley 1983–5). Certainly, the vessels identified as Plainware express a very narrow form range: convex-walled vessels, some at least significantly inturned, and flared tubs. Shouldered vessels are virtually absent, just the apparent high shoulder on vessel 46, and possibly vessel 10. Bowls are similarly rare to absent, especially if one excludes the footring base from cremation 7, likely to belong to a quite distinct phase. Where sherds are decorated, they are probably all attributable to the Deverel-Rimbury tradition. Little was established regarding site sequence and chronology (Johnston 1983–5), and this leaves the question as to whether this is really a diversified Deverel-Rimbury domestic assemblage or an emergent Plainware one. If this seems to be a fine distinction, it illustrates the point that we have little understanding as yet of the process of succession from Deverel-Rimbury to Plainware.

A more recently investigated site in the Upper Thames, at Eynsham Abbey, Oxfordshire, has an assemblage having much in common with Pingewood and this time directly dated by radiocarbon (Barclay *et al.* 2001). There is a small pit group of Deverel-Rimbury pottery and somewhat later material, but the majority of the prehistoric pottery is placed in the Plainware phase. There are two key stratigraphic groups: pottery in the upper fills of a right-angled ditch thought to belong to an earlier enclosure (catalogued vessels 1–10); and a group from layers – especially 1678 – surviving around a curved gully in the interior (nos 19–35).

Barclay *et al.* (*ibid.*) suggested some temporal development within this material, which remains possible, but two points unite the two context groups, aside from some common forms. Firstly, both have similar quantities (by weight) of two main fabric groups: those dominated by quartzite and those with shell as the main temper. Secondly, two and three sherds respectively bore burnt residues that have been radiocarbon dated to give incredibly consistent results (between 2950 ± 40 BP and 2895 ± 60 BP: OxA-7928–7932; Barclay *et al.* 2001, 137). Admittedly these are all shell-tempered sherds and only one has quartzite present as well. At the very least, the shell-tempered early Plainware is thus given a good absolute chronology around 1150–950 cal. BC (*ibid.*, 139). Similar dating

evidence comes from Coldharbour Lane, Kent (Mudd 1994). One of a complex of linear ditches yielded, at a fairly low level (ditch 210, layer 458), pottery and two radiocarbon dates (Q-3255: 2835 ± 45 BP; OxA-4719: 2880 ± 65 BP), which calibrate to 1160–890 BC and 1270–900 cal. BC. The pottery included a Deverel-Rimbury bucket urn and a Plainware ‘hook-rimmed’ jar in similar fabrics (Barclay 1994).

Another extensive valley landscape of the later Bronze Age has been revealed near Knights Farm at Reading Business Park (Moore and Jennings 1992). A good assemblage of pottery associated with settlement structures genuinely bridges the Plainware and Decorated traditions, both being well represented (Bradley and Hall 1992). Stratigraphic interrelationships are few, but those that do exist show the accepted succession. Notable here is pit 3475 in Area 3, which contained Decorated ware (nos 143–150) and pit 3514 with ‘Plainware’ (not illustrated). The former group included a very fine double-beaded bowl with a deep, upright upper body; this must relate to the more typical double-beaded biconical bowls with short inturned necks. Also noteworthy from the Decorated assemblage is a ‘hoard’ of four essentially complete vessels, plus sherds and a bronze pin shank, in pit 247 (*ibid.*, 80, nos 66–71).

Although there is room for discussion on the position of individual vessels, the overall form range of the Plainware assemblage is clear, being dominated by varied convex-walled and thin-walled carinated vessels. There are, however, very few shouldered jars (illustrated), and these tend to be associated with carinated bowls. A few sherds attributed to Plainware have finger-printed or nicked rims. There is no independent dating, nor useful metalwork from the site; it may be that the Plainware phase is late and precedes the Decorated phase without significant hiatus.

Lower down the Thames valley, at the confluence of the Colne system and the Thames, lies the Runnymede/Petters complex. This has a very large and tightly dated sequence of ceramics with much other material. It starts around the turn of the tenth/ninth centuries BC with (late) Plainware. The sheer quantity of bronzes at Runnymede, combined with the previous conservative dating of the Ewart phase, has encouraged the simplistic interpretation that the complex was essentially of full Late Bronze Age date.

Some small allowance has always been made for a continuation into the very early Iron Age (e.g. Needham and Spence 1996, 231). Under the framework offered here, however, a sizeable part of the Runnymede sequence from the late ninth century BC onwards needs to be seen as 'Earliest Iron Age', characterised by a rapid transition to Decorated pottery (Longley 1991; Needham 1996b). Study of the various zones of the site has also revealed that the dark earth deposits are associated with these characteristics. That some refuse deposits may predate this phase (for example, those from 'the midden' in Area 6 stratigraphic units B/C; Needham 1991, 66–7) is not at issue. However, the dark earth layers in the river channel do not begin until the late ninth century BC (*ibid.* 377, fig. 138) and, whilst it is convenient to attribute them to the removal of platforms and exposure of the bank, it would seem that similar deposits alongside and anywhere else on the site do not begin earlier.

The association at Petters Sports Field is quite specific, a Ewart hoard having been buried high in the silts of a large ditch and covered by a dump of pottery-laden refuse (O'Connell 1986). The pottery has forms diagnostic of the Decorated phase, whereas a few sherds low in the ditch link better, through their fabrics, to slightly earlier ceramics (Needham 1990). There was also a little animal bone surviving in the dump and an underlying layer, the two contexts thereby being radiocarbon dated indistinguishably (*ibid.*). These strongly suggest burial of the hoard late in the ninth century BC at a time when the Decorated assemblage was already manifest. Although there is a less clear stratigraphic relationship at Minnis Bay, on the north Kent coast, it has much in common with Petters in having yielded a Ewart scrap hoard and comparable styles of Decorated pottery (Worsfold 1943; Champion 1980a).

The apparent ringwork or enclosure at Queen Mary's Hospital, Carshalton (Greater London), has produced an impressive array of artefacts from two phases of early exploration (Adkins and Needham 1985). Little of the material, however, is securely recorded to context and this limits interpretation prior to results of subsequent work in the area. In 1985, we were at pains to stress the limited proportion of vessels that were decorated and consequently classified it as a Plainware assemblage. However, some 16% of surviving rims are decorated, not a particularly low proportion.

More critically, the weight of the morphological evidence now seems to favour an advanced post-Deverel-Rimbury date, if neck cordons, handled globular jars and some of the weak-shouldered jars are accepted as most typical of the Decorated tradition. Many of the shouldered jars and bowls fit that horizon just as well as earlier. Significantly, perhaps, much refuse came from charcoal-rich layers high in the ditch fill, potentially at a late stage of the site's life, whereas the carinated bowl known to be from the primary fill of the ditch would be consistent with an earlier (though not necessarily greatly earlier) construction date.

Detailed assessment of the pottery from Weston Wood, in the Surrey Weald, demonstrated some essential differences between Areas 1 and 2 (Russell 1989). These showed most markedly in the proportion of decorated pots, which was relatively low in Area 2 and considerably higher in Area 1 (8% and 49% respectively of the estimated vessel equivalents). Although there were differences in the fabric compositions of the area assemblages, both were dominated by group 1 fabrics constituting eight varieties of flint-gritted ware. Classification of Area 2 pottery to the Plainware phase and Area 1 to the Decorated is supported by the specific forms represented and by the radiocarbon date, albeit very imprecise, on charred grain from the latter context suite (Q-760: 2460 ± 110 BP). The suggested eighth to seventh century BC date for Area 1, associated with two circular post structures and a rectangular platform, holds good. Russell thought that the pottery in Area 2, from a series of pits and an occupation layer, might be at a developed stage of Plainware. If the practice of decorating pottery expanded rapidly, there need not be any real hiatus and it might explain occasional late-looking elements from Area 2.

Potential Plainware pottery is as yet sparse in Sussex; assemblages are still few, generally limited in size and poorly contexted, and not susceptible to close analysis (Champion 1980b; Hamilton 1987). At Yapton (Hamilton 1987), a radiocarbon date on charcoal (Har-7038: 2600 ± 70 BP), which calibrates to 920–510 cal. BC (with the largest peak between 850–750 cal. BC) supports Hamilton's very late dating of the pit groups of pottery at the point of transition to Decorated wares. Even the oft-quoted 'classic' site of Plumpton Plain B might now be treated with some reserve. Without denying

the possibility of earlier origins, some features of the pottery (Hawkes 1935) are best placed no earlier than the transition, notably neck-cordons, finger-printed shoulders, weakly cabled rims, externally nicked rims and the geometrically decorated finewares.

The salvage work in 1995 at Shinewater Marsh close to the East Sussex coast produced a rich array of pottery, metalwork and other fine equipment associated with a timber platform braced with piles driven into the wet marsh surface (Greathouse 2003). The platform, of some size (well over 2000 m² before partial destruction), was approached by a wide timber corduroy-style causeway from the west, also sampled by excavation. Diagnostic bronze metalwork is consistently of Ewart types, while a suite of radiocarbon determinations and dendro-chronological wiggle-matching indicate, firstly, the essential contemporaneity of trackway and platform and, secondly, a probable date towards the end of the ninth century BC (Bayesian analysis suggests 830–800 BC; *ibid.*, 6).

The platform was overlaid by a thick, dark earth deposit rich in occupation remains, including hearths, strongly resembling those at Wallingford, Wittenham Clumps and Runnymede, and also recalling the ‘midden’ deposits of the Wessex sites, Potterne, East Chisenbury and All Cannings Cross. The pottery recovered from the dark earth has yet to be fully analysed, but includes Decorated material (S. Hamilton pers. comm.). These refuse deposits may, obviously, continue some time after the platform was constructed, whereas many of the diagnostic bronzes were found in the peat under the platform. Even if, as seems possible from the combined evidence, those bronzes were deposited from the surface of the peat early in the life of the platform (rather than in an entirely earlier phase), they are likely to have predated some or much of the occupation deposit.

Although the circular enclosure at Mill Hill, Deal, on the East Kent coast, yielded a little bronze metalwork along with a good pottery assemblage (Champion 1980a), the material – a chisel blade fragment and a knob-headed pin – can hardly be considered compelling evidence for a full Late Bronze Age date. The pottery is characteristic of the transition to Decorated material. The vast majority of the pottery from enclosure B at Highstead, near Canterbury, can also be attributed to the Decorated tradition (P.

Couldrey pers. comm.; Cunliffe 2005, 94). Clay moulds from an isolated pit were for nail-headed pins of Late Bronze Age, or conceivably even Earliest Iron Age date. Further north, a ring ditch at Margate yielded a useful stratified group of material high in the ditch fill. The excavator saw the pottery as a coherent, short-lived group (Smith 1987, 252). It is associated with three bronzes, a pair of tweezers, a button cap and, most significantly, a razor relatable to Hallstatt C crescentic single-edged examples. This identification and the pot forms represented tie in well with an eighth century BC, hence Earliest Iron Age, date.

The rectangular enclosure excavated at Lofts Farm provides a key stratified sequence for the Essex region (Brown 1988; see also Needham 1996c). Only the 'early assemblage' described by Brown is relevant to Plainware; by the 'middle assemblage', there are a range of clear marker forms and decorative techniques which are especially noteworthy in the Thames valley and elsewhere in the South-East and have many cross-links to Cunliffe's (1991) Earliest Iron Age styles. The 'early' group is not large, but has convex-walled vessels, hollow-necked bowls – either carinated or round-bodied – internal bevels and not-too-heavy club rims, one very reminiscent of those at Eldon's Seat. Decoration is restricted to two horizontally grooved sherds, both from a post hole of the central roundhouse and plausibly late intrusions as the structure decayed.

The question at Loft's Farm must be whether this early material much precedes the emergence of the Decorated assemblage, presumed to be at the turn of the ninth/eighth centuries BC? The three radiocarbon dates are not especially helpful. Two are for contexts yielding the middle assemblage, but while that on floated charcoal from the upper fill of the north ditch is late (HAR-8515: 2460 \pm 70 BP; N. Brown pers. comm.), calibrating to 810–390 cal. BC, that for an oak stake from the lower well fill is somewhat earlier (HAR-8521: 2800 \pm 110 BP), although very imprecise, the calibration terminating at 750 cal. BC. It thus seems most likely that the stake belongs with the original construction of a well that was in use for some time before the backfilling that introduced the pottery. A date from the upper well fill is again on floated charcoal (HAR-8514: 2680 \pm 70 BP) and hardly of value for establishing a good chronology.

A second excavated enclosure in Essex, at Broomfield, is very similar to Lofts Farm – a sub-rectangular enclosure ditch and a principal internal building, this time situated towards the rear at the west (Atkinson 1995). The pottery assemblage also indicates that it is broadly contemporary with Lofts Farm, and, whilst not highly decorated (Brown 1995a), the specific decoration and morphologies suggest the main use of the site around the transition rather than earlier. The same features characterise the earliest of the post-Deverel-Rimbury pottery groups from North Shoebury (Brown 1995b).

Essex is also a key area for the circular enclosures known as ringforts or ringworks. Of the two classic examples at Mucking, only the North Ring has been sufficiently published to aid this discussion. The complex ditch fills were interpreted by the excavator in six phases, phases 1–3 representing period I and 4–6 representing period II, which followed a major structural reorganisation (Bond 1988).

In terms of ceramic change, however, there may be more useful breaks in the six-phase sequence. This emerges from the consideration of fabric compositions in the various phases of ditch fill. Although redeposition will have blurred phase distinctions (Barrett and Bond 1988), any clear changes showing in the recovered record are likely to reflect real changes that were actually more extreme in terms of contemporary deposition. Phase 1 alone shows a complete dominance of fabric 9, a coarse, fairly hard ware with crushed flint up to a large size (7 mm); this is supplemented by other densely flint-gritted fabrics (11, 13) and a small amount of sandy fine wares (1, 4, 5) (*ibid.*, 26, fig. 17, 35). Phases 2–4 show similar compositions, with various fine-medium size flint-gritted fabrics (8, 10, 11, 13) all increasing at the expense of fabric 9. Phases 5 and 6 are united in a marked increase in fabric 6, a hard coarse ware with both sand and rather fine flint (< 2 mm); fabrics 9 and 10 decline, while 8 and 11 are maintained at about the previous levels. There is, however, an increasing proportion of minority fabric 14, small to medium flint with some vegetable temper, which was barely represented in the earlier groups.

There are, therefore, clear signs from the fabrics of a ceramic tradition in transition during the lifetime of Mucking North Ring,

and this may be echoed in the forms and decoration. The sand/flint ware of phases 5–6 seems to reflect a general replacement of coarse flint wares around the Plainware/Decorated transition in the Thames valley at least. It is associated with an assemblage (as illustrated: *ibid.*, nos 26–64) which can be regarded as distinctive of this transition, characterised by increasing decoration, such as rilling, grooving, dot-filled triangles and nicked or slashed rims and cordons. When decoration was used most, in the latest phase, 19% of coarseware rims were decorated (*ibid.*, 37). The cordons are situated in the neck and fine carinated bowls include those with elaborated profiles (e.g. nos 30, 31, 47) and at least one biconical bowl. The phase 2–4 pottery shows a few elements that already foreshadow the succeeding repertoire (e.g. nos 7, 9, 19), but shares with phase 1 convex-walled forms more typical of Plainware. Phase 2–4 also has tub/bucket forms and cupped mouth jars (nos 13, 14) which probably do not appear until the transition.

The chronology of this sequence is not well established. Two radiocarbon dates apply to the last of the three pottery groups (2700 ± 80 BP; 2630 ± 110 BP), but are on unspecified charcoal, potentially of some age at deposition. They are best regarded as *termini post quos* and the later one certainly does not in any way conflict with an eighth century date BC for phases 5–6. The crucible from phase 6 deposits, interestingly, would have had a rather modest capacity (Needham 1988), which may have been suited best to the casting of small ornaments and fittings rather than large tools and weapons.

Much more specific are the foundation deposits of clay refractories for Ewart type swords placed in two terminals of the enclosure ditch of the Springfield ringwork, further north-east in Essex (Buckley and Hedges 1987). The radiocarbon date for the primary ditch silts is early (BM-2313R: 3090 ± 150 BP), but too imprecise to help this discussion. Nevertheless, the original construction of the ringwork is firmly placed in a period when Ewart sword production held great symbolic value, presumably before the end of the ninth century BC. Nigel Brown's analysis of the pottery (pers. comm.) shows that a rather limited assemblage very low in the ditch fills can indeed be classified as Plainware; however, the much larger later stratified groups document the

transition to Decorated wares. Charcoal in the 'middle' silts yielded a date of 2570 ± 140 BP (BM-2314R), again very imprecise, but in broad accord with conventional dating of the pottery.

Another ringwork sampled by excavation, at South Hornchurch in south-west Essex, has been shown to be part of a complex sequence of landscape evolution, involving changing field ditch systems and a variety of structures (Guttmann and Last 2000). Phasing depends on a few key stratigraphic intersections and to some extent on assumed spatial relationships, but the analysts also had to resort to pottery typology (*ibid.*, 322–4). The published evidence is therefore difficult to use empirically for relative dating, but the overall absolute span suggested, ninth to eighth centuries BC, accords well with the comparanda elsewhere and a minor proportion of the pottery forms would fit within the Plainware tradition.

At Ivinghoe Beacon, on the Buckinghamshire Chilterns, there is co-association between Ewart metalwork and Decorated pottery, mainly in a thin soil profile without obvious stratigraphy (Cotton and Frere 1968). There was certainly full Late Bronze Age activity in the vicinity, as witnessed by subsequent finds of a Wilburton sword at the site itself and a Wilburton hoard not far away (Dalwood 1987). Britton (1968) wondered whether one or two pieces of the excavated metalwork might not relate to Wilburton material, but overall he saw the assemblage as 'mature Late Bronze Age' – i.e. Ewart stage in current terminology. There was clearly activity on the site prior to the first rampart; some post holes and pottery were sealed under its talus in site A. However, the rampart, sometimes seen as potentially of Late Bronze Age origin, is poorly dated, a problem not resolved by a later attempt to radiocarbon date animal bones in the talus-sealed deposits (Green 1981). Little if any of the published pottery needs to be assigned to the pre-Decorated horizon, broadly supporting the original 'Iron Age A' dating (Waugh 1968). It may be that a phase of metalworking late in the Bronze Age gave way around the transition to activities reflecting new preoccupations as bronze was being abandoned.

To the north, Stonea Grange in Cambridgeshire is another example of a rather loose association between a scatter of metalwork and stratified occupation evidence, including distinctive ceramics (Needham 1996c; 1996d). The metalwork spans both

Ewart and Llyn Fawr traditions; the pottery too is likely to represent a span, but even the early group from pit 920 is now best dated not earlier than the late ninth century BC, i.e. to the transition.

A ringwork has been found recently in North-amptonshire at Thrapston (Hull 2000–1). The Thrapston pottery, concentrated in the upper ditch fills, is consistently of Decorated styles (Jackson 2000–1) and this ties in with the radiocarbon dates: 2630 ± 50 BP on bone from the primary silts (BM-3113) and 2540 ± 35 BP on antler from the middle fill (BM-3129); at two sigma, these calibrate between 920–600 and 810–540 cal. BC respectively.

Since the breakthroughs in later Bronze Age settlement studies of the 1970s, the co-occurrence of bronzes and ‘Early Iron Age’ pottery at Castle Hill, Scarborough (East Yorkshire), has been taken to be good grounds for more overlap. Reginald Smith had from the outset stressed the contextual distinction between the different materials: ‘the bronzes, which were found on the level away from the pits... possibly had nothing to do with the occupation in question’ (Smith 1928, 179). However, as much pottery came from surfaces as from the pits and there were cross-joins, which convinced the excavator and Elgee that everything belonged together (Elgee 1930, 176). Any contextual distinction is now further blurred by the discovery in more recent excavations of a bronze sword associated in the upper levels of a pit with characteristic Scarborough pottery; lower down were the remains of ox skulls (Rigby 2005).

It is of course always possible that the occupation at Scarborough was of significant duration, with some of the pottery earlier than the rest, but overall, Smith’s assessment that it was an homogeneous group still seems good, even with the addition of the recent material. Everything is consistent with an early Decorated assemblage in both decorative repertoire – horizontal groove bands, simple geometric incised designs, many finger-printed and slashed cordons usually sited in the neck, finger-printed shoulders and rims (including the outside lips of some), stabbed rows in necks – and forms – neck-cordoned jars, flared mouth shouldered jars, tripartite bowls, beaded biconical bowls. It really does seem best to regard the metalwork/ceramic association as significant, but the precise significance remains to be discussed below.

In contrast to Scarborough, the diagnostic metalwork at Staple

Howe has long been recognised to belong to the Llyn Fawr (Hallstatt C) phase – particularly the razors and the socketed axe fragment. Yet it is associated with a similar range of Decorated pottery and there are also two rare early pieces of ironwork (Brewster 1963).

Scrapping bronze; forging the future?

Whatever the broader context of the switch in the primary metal employed by society, it is important to try to discern how that change came about. At least three main models of change can be hypothesised for the eclipse of bronze by iron as the primary metal for tools and weapons (Fig. 3):

1. *Steady transition*: the development of ironworking during a prolonged phase of diminishing bronze use (e.g. Cunliffe 1991, 452; Kristiansen 1998, 211–13);
2. *Iron undermining bronze*: the rapid abandonment of bronze due to the uptake of iron as the socially acceptable metal (e.g. Burgess 1979, 275);
3. *Bronze crisis*: a severe reduction in the bronze stock in circulation, followed by a period of low-intensity metal use in which iron gradually replaced bronze (Thomas 1989). Two quite different variants can be suggested within this model: a) a crisis in supply leading to the dilemma between maintaining stocks or maintaining ritual deposition practices, and ultimately to stocks declining (e.g. Bradley 1988); b) a crisis in confidence in the virtues of bronze for stabilising society, leading to the abandonment of bronze for its strategic social roles.

As already noted, a key feature of the transition from Late Bronze Age to Earliest Iron Age is a vast inequality in the representation of metals before and after. The resultant interpretative problems have been recognised for some while (e.g. Champion 1975; Burgess 1979; Thomas 1989). Whilst taphonomic process might account for some of the discrepancy, it is unlikely to be more than a contributory factor. The quantitative imbalance would stem initially from the likelihood that bronze stocks were at their highest point after one and a half millennia of progressive, if not necessarily steady, accumulation; self-evidently the availability of iron would be at the

other, thin end of its growth curve. The quantity of iron in circulation could not attain the levels seen for bronze late in its sequence for some significant period of time, unless there had been forced iron production on a considerable scale.

Models for the switch from bronze to iron

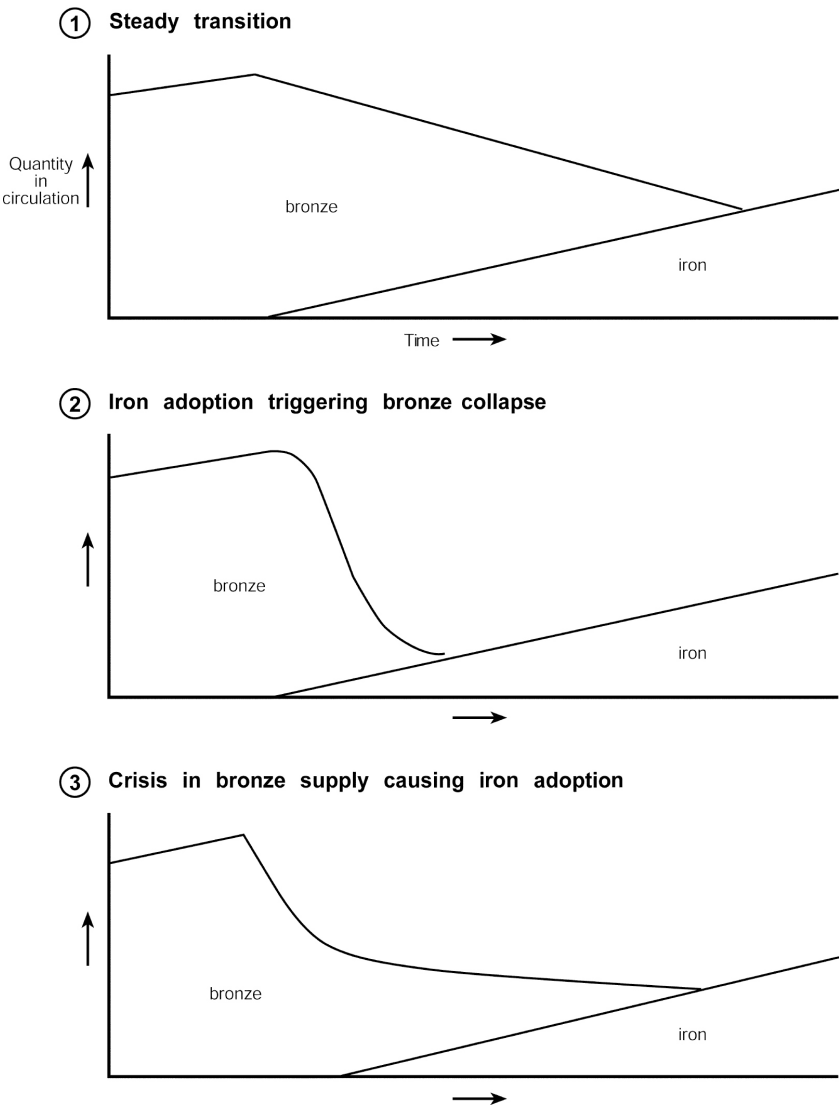


Fig. 3. Models for the switch from bronze to iron as the primary metal for tools and weapons.

Current evidence does not support the latter view, but instead indicates at best modest-scale local ironworking for the first centuries of the Iron Age; larger-scale smelting in certain iron-rich regions developed later (Ehrenreich 1994). Indeed, unequivocal evidence for iron smelting early in the lowland Iron Age is still hard to find, rare examples being Brooklands (Surrey), Longbridge Deverill (Wiltshire), La Sagesse and Dunston Park (Hampshire). If growth in iron stocks was slow, then this might encourage the hypothesis of a long overlap with final bronze types, a hypothesis that pervaded much early thinking on the transition. While there clearly was a period of overlap, the hypothesis of a graduated switch does not explain the dramatic changes to the bronze circulation system implied for the end of the Ewart phase (see below).

In the event that post-transition communities were concerned to conserve and build up their iron stocks, the natural thing to do would be to develop an intensive recycling regime. This would exacerbate the archaeologically apparent imbalance between the two metals because a far smaller proportion of the iron stock would be leaving the ‘systemic sphere’ as losses, discards and permanent deposits (Fig. 4).

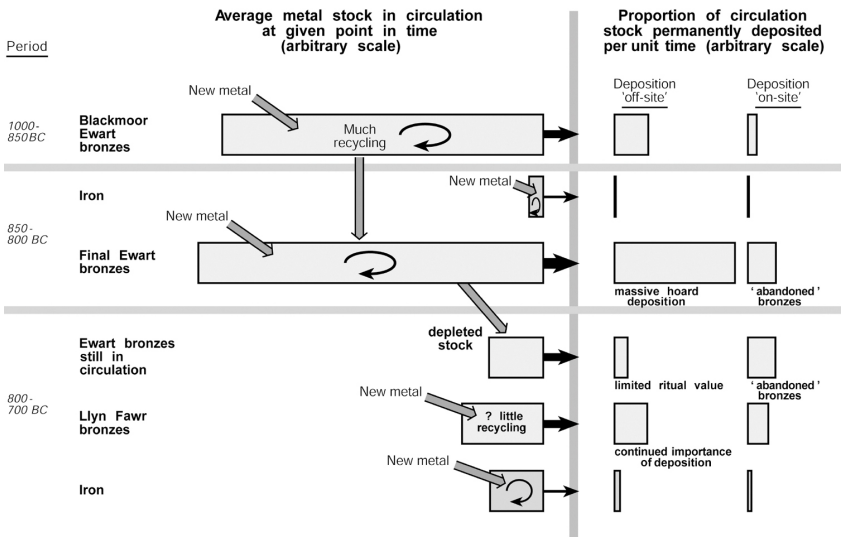


Fig. 4. Possible relative quantities of bronze and iron in circulation and permanently deposited before, during and after the transition.

Contrast this situation with that for bronze which increasingly becomes redundant in many spheres of use; that redundancy means that an enhanced proportion of the bronze stocks would begin to enter the ground in one context or another (I have allowed for 20% of the bronze metal stocks to remain in circulation after the transition). Add to these features the well-rehearsed arguments about the differential corrosion and recognition potential of objects in the respective metals and it becomes clear that the archaeological record is bound to give an extremely exaggerated view of the bronze/iron imbalance.

So, aware of this massive distortion, we should not be too concerned that very early iron proves hard to identify, or that no great quantities of iron are in evidence even by the full Early Iron Age. Incidentally, if it were to be suggested that intensive recycling was not being practised, then it would mean that the current archaeological yield of early iron represents an even smaller stock in circulation relative to the preceding bronze stock.

A relative shortage of iron would have had the effect of severely constraining profligate ritual consumption of the sort that seems to have characterised the Late Bronze Age. One response might have been instead to retain bronze objects for ritual roles, but this could have run against the grain of any perceived devaluation of the potency of bronze. It does seem as though for a while, during the Llyn Fawr period, bronzes maintained some significance in ritual activities (Thomas 1989; Needham 1990). Very fine Gündlingen-derived swords and a range of decorated axes were the most frequent offerings, and while the swords and some of the axes were usable and indeed used, a great many of the latter were non-functional (see also Fontijn and Fokkens this volume). Spearheads seem no longer to have been produced in bronze by this time (O'Connor this volume). Ostentatious deposits of class B3 cauldrons were more dramatic, at Llyn Fawr (South Wales), the Thames at Battersea and Sompting (Sussex), for example, but also broken up in the remarkable burial context at Broom, Warwickshire (Palmer 1999, 36ff). This is surely the background to the increasing frequency of sheet bronze fragments at Potterne and elsewhere.

In contrast to bronze, obviously prestige iron objects were still very exceptional at this date; the Llyn Fawr bog find itself is famous

for containing some distinctive iron objects – a sword, sickle and spearhead – alongside tools and weapons of the last recognisable bronzeworking tradition (Fox and Hyde 1939; Savory 1980). The spear-heads of the loosely associated river group from Melksham might possibly belong here (Gingell 1979) and the well-known series of river finds of late Hallstatt daggers take us into the final seventh and sixth centuries BC.

Despite cautious dating by Manning and Saunders (1972), it has become clear that some of the iron socketed and looped axes belong to the earlier half of the Iron Age. They have long served as a focal point for discussion about the transition and continuity, because of their obvious morphological relationship to Late Bronze Age forms. Understanding their development has been thwarted by the small number known (some two dozen) and the poverty of closely datable contexts. Although it has been clear that they can date to late in the Iron Age and are thus not specifically a transitional form, the contexts at Traprain Law and Cold Kitchen Hill always looked potentially early and new examples add fresh evidence for early origins. A find made at Thurcroft, South Yorkshire, is unassociated, but its form, with clear mouth-moulding and rectangular body section, is so reminiscent of bronze axes of Yorkshire type that it is hard to dismiss a direct link (Fig. 5a). It might for example, be an immediate successor of the bronze axe, but we should seriously consider the possibility that it was coeval with the bronze type.

More definitive in dating terms is the axe from Buscott Lock, Oxfordshire (Fig. 5b; Barclay *et al.* 1995). A surviving piece of the haft has been radiocarbon dated to 2480 ± 50 BP (OxA-6216). Although falling on the insensitive part of the curve, the broad calibrated range of 790–410 cal. BC is useful in placing it in the earlier, rather than later, half of the likely time-span. Just across the Channel there are two further radiocarbon-dated finds, from Lith (2540 ± 50 BP; Van Heeringen 1998–9) and Rijnwaarden (UtC-1356: 2520 ± 60 BP; Hulst 1990, 188–90; 1992, 171; J. Lanting pers. comm.).

Otherwise, we have a range of small ironwork from a variety of settlement contexts, which cannot be thoroughly reviewed here. Sites like Staple Howe, broadly, although not necessarily exclusively, of Llyn Fawr/Hallstatt C date are well known for their

few pieces of iron. Of the sites discussed, there are further pieces from Scarborough, Grimthorpe, Eldon's Seat, Potterne, All Cannings Cross, Wallingford and Wittenham Clumps, while there is also a small fragment of iron (as yet unanalysed) from a stratified context alongside the late ninth century BC trackway at Willingdon Drove, on Shinewater Marsh, East Sussex. The same stretch of trackway yielded a bronze knife of Late Bronze Age type and part of a shale armlet (Greatorrex 2003).

This poor-yield period for ironwork is a feature not only of Britain, but also of many other parts of northern Europe where burials are not furnished with iron. With more vigilance we are undoubtedly going to identify more early iron objects, whether of the Early Iron Age, the Earliest Iron Age, the transition, or even the Later Bronze Age. But it seems very unlikely that the current numerical ratio between these and Late Bronze Age bronzes will alter.

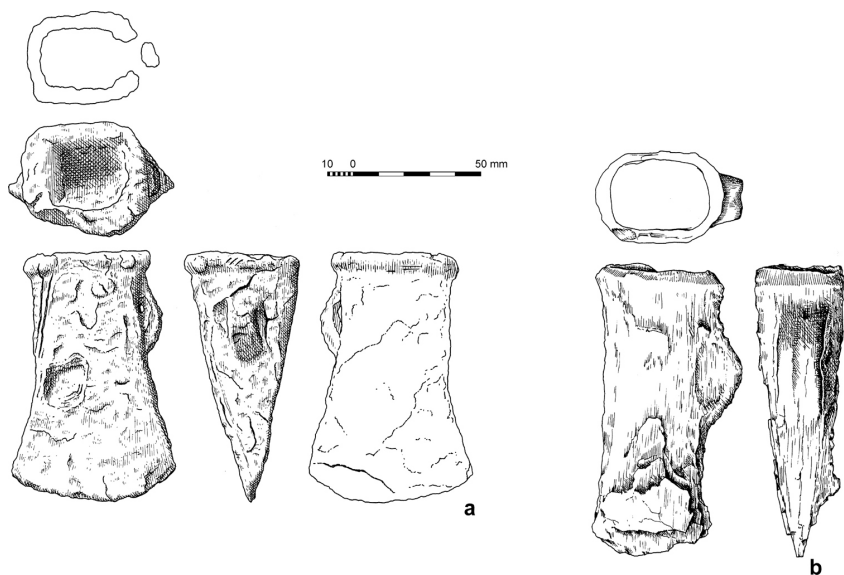


Fig. 5. Early iron socketed axes from a. Thurcroft, South Yorkshire; b. Buscott Lock, Oxfordshire. Scale 1:2. (b after Barclay et al. 1995).

Estimated relative quantities of bronzes recovered 1300-700 BC

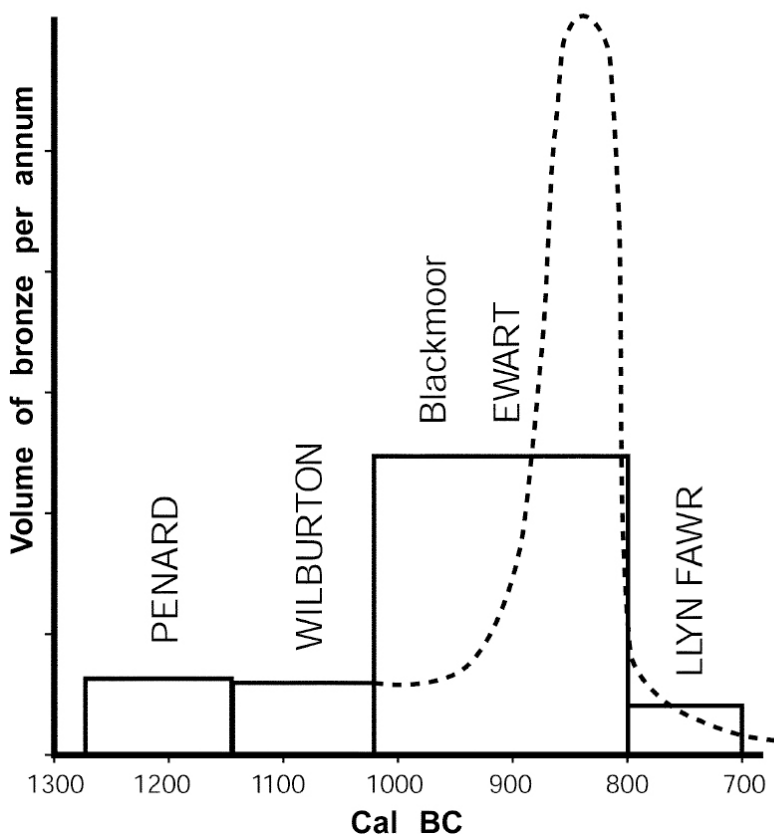


Fig. 6. Estimated relative quantities of bronze metalwork permanently deposited between c. 1300 and 700 BC. The relative proportions for the respective assemblages are represented by the areas under the blocks or curve; the volume deposited per annum therefore alters inversely with any change in time-span.

Bronze redundancy and bronze 'abandonment'

Over twenty-five years ago, Colin Burgess made the important point that it was the great quantity of metal in Ewart hoards, rather than the demise of subsequent Llyn Fawr metalwork, that seemed to mark the end of bronze as the primary metal for tools and weapons (Burgess 1979; also Champion 1975, 139–40). It is useful now to try to refine this model and look in more detail at the deduced redundancy of bronze stocks at the transition. There is no evidence

in Britain for any significant increase in the production of ornaments at that time, which would have been one way of keeping excess bronze in circulation as tools and weapons were increasingly turned out in iron. Consequently we can predict that large quantities of bronze metal came to be abandoned in one way or another over a period of time.

Working on the assumption that bronzes from different phases have a roughly equal likelihood of modern discovery over a wide area, it follows that we should be able to recognise any peak in deposition and abandonment from the bronzes recovered. There are undoubtedly regional variations in both original deposition and recovery, as Thomas (1989) has noted, but taking a large area like lowland Britain is probably a virtue in terms of evening out differences. The previously observed Ewart metalwork peak in fact shows in spectacular fashion: on the basis of a rough quantification, the deposition rate during the Ewart period was around five times that during the previous 300 years of Penard and Wilburton currency (Fig. 6).

Indeed the peak is probably more accentuated still, since there are grounds for thinking that the deposition rate during the earlier part of Ewart currency, the Blackmoor stage, may not have been any greater than in the preceding period (the dashed line in Fig. 6).

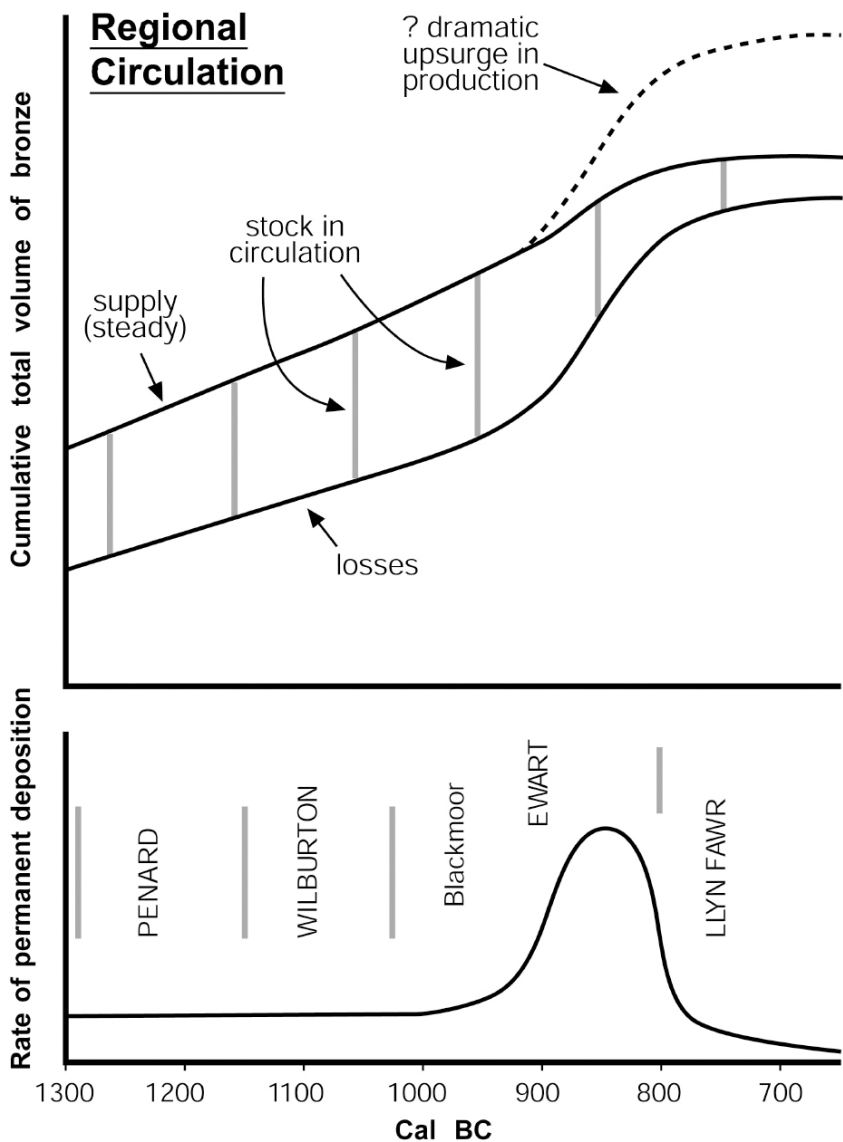


Fig. 7. Postulated supply and loss curves for bronze metal in circulation in Lowland Britain to account for the relative quantities deposited as shown in Figure 6.

The volume of metal deposited during the succeeding Llyn Fawr period shrank dramatically; depending on the duration we allow for Llyn Fawr type metalwork, the deposition rate was of similar order to, or even less than, that of the Penard and Wilburton stages, but

the quantity of bronze in circulation seems to have been considerably less than in those earlier times. O'Connor's detailed review (this volume) of the linkages between Llyn Fawr metalwork and the better-dated continental sequences suggests a long rather than short overall chronology – around 175 years. This would stretch the recorded deposition rate considerably and further emphasise the contrast with the late Ewart rate. However, this longevity may obscure a tailing away of Llyn Fawr production and use – only the Sompting hoard is definitively dated to a late stage (seventh century BC). It may also be wondered whether the Gündlingen swords were a shorter-lived type, given the typological connections to Low Countries and central European bronze and iron Hallstatt C swords (Rohl and Needham 1998, 109–10).

The pronounced Ewart blip could theoretically arise simply from a dramatic upsurge in supply (Fig. 7).

However, since this glut was evidently affecting many areas of northern and western Europe simultaneously, one would have to invoke a sudden scaling up of gross production at the sources in similar proportion to the deposited record. There is no evidence for such a colossal change and it also needs to be born in mind that if copper production suddenly expanded, say, five-fold, something similar would be demanded of tin in order to maintain a reasonable bronze alloy. There may be a case for some pressure on tin supplies, but nothing more than a small decline in tin levels is evident from analyses.

Any increase in metal supplies during the closing stages of the Bronze Age is unlikely to have contributed more than a small proportion of the Ewart deposition peak. It is hard to escape the conclusion reached by Burgess (1979) and others that this feature marks the large-scale release of circulation stocks into the deposited record (the contraction of the vertical bars in Fig. 7). This is the only marked and widespread decline in circulation stocks that can be identified in the archaeological evidence for the prehistory of Britain. The chronology of the mass off-loading of Ewart metalwork is unlikely to be protracted. For one thing, the typological range of the vast majority of hoards of the period is very homogeneous (allowing for regionally specific forms). There are virtually no examples of Llyn Fawr metalwork in the innumerable Ewart hoards

(Burgess 1979). Secondly, the dating of samples in direct functional association suggests that the bulk of Ewart metalwork had fallen out of use by about 800 BC (Needham *et al.* 1997).

It is worth exploring the difference between the systemic roles of bronze and iron on either side of the transition as a result of the massive difference in availability. Some of the main features of the systems are shown in [Figure 8](#). This makes it clear that the versatility of bronze in terms of the different ways it could be used to enhance prestige (Needham 1998, 304–6) would have been severely constrained in the early iron-based system. This immediately suggests that iron could not have played the pivotal social role envisaged for late bronze. A second key point is that the inter-regional effects of the late bronze system not only far exceeded any comparable effects in the case of iron, but were also responsible for driving the system on, tending to an ever-increasing spiral. This, above all, epitomises the difference between the two systems.

The above review of sites illustrates a range of possible relationships between Ewart metalwork and Decorated pottery in complex or uncertain site sequences. While it may seem at first sight that there are a good number of associations, many may be in overlapping sequence. The back-shifting of Ewart metalwork from c. 900–700 BC to c. 1020–800 BC still leaves the ‘mature’ Ewart assemblage, most familiar from innumerable finds, as post-dating c. 920 BC ([Fig. 2](#) above). With the increasing redundancy of bronze as the bronze standard was replaced by some other value system, it may be that hoards and accretive metalwork deposits were increasingly discarded/deposited *and* left unretrieved at a late stage of Ewart currency, say the late ninth century BC, precisely the time when Decorated assemblages were beginning to emerge.

There would also have been ample opportunity for Ewart (or indeed earlier) metalwork to be incorporated in deposits post-dating the primary use of that metalwork. First and foremost, any site whose occupation spanned parts of the Late Bronze Age and Earliest Iron Age – as a good number do – could very readily yield residual Late Bronze Age bronzes in Earliest Iron Age contexts. Secondly, there could have been a limited retention of Ewart bronzes in use after 800 BC for both functional and symbolic reasons. This must have been a very minor proportion of the prior Ewart circulation

stock, too little to register as yet in the sample of directly dated Ewart bronzes. However, as these relatively few bronzes eventually became redundant, they would have come to be ‘abandoned’ in Earliest Iron Age contexts (Fig. 4 above). Certainly, current (limited) analytical evidence is not in favour of any significant percentage being converted into Llyn Fawr bronze types (Rohl and Needham 1998, 110). So much Ewart metalwork had been in circulation prior to 800 BC that, even after massive off-loading as hoards, the minority carried over into the next ‘phase’ could still have constituted a relatively significant quantity compared to that of the reduced metal stock of Llyn Fawr times.

Another vital aspect of bronze redundancy is what caused it? Levinson (1989, 441) advocates not worrying too much about the cause, and there is no doubt that local responses *could* have found local solutions. We certainly need to disentangle the broader cause-and-effect chain that was beyond society’s control from the decision-making possible within those externally determined constraints. If iron itself was not substituting for the full range of bronze roles, it is hard to see how its uptake, even if contemporary with the abandonment of the bronze standard, could in itself have been the cause of abandonment.

Rather than ‘isolating the point at which economic dependence on iron became paramount’ (Snodgrass 1989, 29), we should perhaps isolate the point at which ideological dependence on bronze ceased to be paramount (Thomas 1989, 277). It seems likely that iron was one element in a bigger set of new values and modes of interaction and, thereby, almost incidentally came to be taken up because of the appeal or relevance of that bigger set. Earlier suggestions of a crisis in the bronze supply (e.g. Ehrenreich 1994, 16; Bradley 1988, 255–6) do not remotely stand up to the evidence for massive bronze surpluses at the end of the Ewart period. More attractive is the idea that the bronze system spiralled to a point that finally devalued the material, and that this in turn led to disenchantment and the simultaneous promotion of new modes of social articulation. A new basic value system quickly arose and became widely disseminated in lowland Britain.

Continuity?

Both cause and effect of the tendency to emphasise continuity throughout the post-Deverel-Rimbury sequence has been the liberal use of an ill-defined 'Late Bronze Age/Early Iron Age' label, often to encompass a span of centuries. Terms such as Late Bronze Age/Earliest Iron Age and Late Bronze Age–Earliest Iron Age are most useful if accepted as having specific meanings. I suggest above that Late Bronze Age/Earliest Iron Age should refer specifically to the relatively narrow transitional phase between, say, 850 and 750 BC (or even 850–800 BC) during which different critical changes were not necessarily perfectly synchronised. On the other hand, 'Late Bronze Age–Earliest Iron Age' has the different and poor-resolution meaning of the whole span (c.1150–600 BC). Certainly, where any reasonable amount of pottery is present on a site, it should be possible to attribute it to the Plainware or Decorated assemblages; there may also, as we have seen above, be sequences that genuinely bridge the ceramic transition, and yield contexts and ceramics that manifestly document the process of transition.

There is no question that to some degree the earlier ceramic repertoire evolved into the later one. However, not only were the expansion of form and decorative practice and the modification of fabrics marked, but these changes seem to have occurred rather rapidly. Another implication of the suggested chronology is that the absolute quantity of ceramics in circulation increases dramatically from the transition onwards. This should not in itself be a point of concern, since we should expect no universal ideal level of ceramic circulation. Instead, the probable sudden change of gear in production and consumption needs to be drawn into interpretations just as much as the change in repertoire.

One simple explanation would be to see the previous investment in the supra-utility roles of bronze being switched to other media, in particular ceramics. It is surely significant that there was a step up in the complexity of symbolic expression through this medium; even though it may not have provided a direct replacement for all the specific functions bronze served, it provided one invaluable and regionally controlled vehicle for establishing and reflecting diverse social relations including group identities, inter-regional competition, and intra-societal ranking. It was also integrally tied to the new central mechanism for the appropriation and redistribution

of community food produce and craft output discussed below.

It is also clear from the foregoing account that many patches across Britain's lowland landscape continued to be occupied from a stage late in the Late Bronze Age through to the Earliest Iron Age. Significantly, where there is good evidence from larger-scale fieldwork, this transition is generally accompanied by critical changes in landscape organisation, behavioural activity or site function.

Closer examination thus belies any sense of unaltered patterns of social and environmental interaction. There was a range of key changes at roughly the same time, not all necessarily as tightly dated as one would like. The development of large earthwork enclosures (Cunliffe 2000, 154; Ellis and Rawlings 2001) and classic hillforts, as distinct from the ringworks discussed above, is no longer obviously a key feature of the Late Bronze Age proper. Very few indeed in lowland Britain can be dated securely to a pre-eighth century BC horizon (e.g. Needham and Ambers 1994). The widespread view of the past two decades that the hillfort building tradition was earnestly underway during the Late Bronze Age has been undermined by the failure to find good early dating evidence for ramparts at many sites including those like Ivinghoe Beacon, Harting Beacon, Cadbury Castle or Mam Tor, where Late Bronze Age metalwork and settlement evidence co-occur. The review of south-eastern hillforts by Hamilton and Manley (2001), for example, presents only insecurely dated or poorly classified sites in the 'early Late Bronze Age', while the longer list of 'latest Late Bronze Age' sites have Decorated pottery associations, often in primary contexts. If there were occasional earlier hillforts or large enclosures in lowland Britain (such as Rams Hill, Berkshire), it would appear that they answered particular local circumstances, prior to their more general adoption from the Earliest Iron Age onwards.

Other features of change concern the practice of agriculture and storage of food surpluses. Although sites such as South Hornchurch suggest that there was no sudden curtailment of field system construction around 800 BC, the collective indications are that the phenomenon of laying out new systems characterises the Middle to Late Bronze Age without any significant later extension (Yates 1999; 2001; Bradley and Yates this volume). In some areas, new

organisational principles are seen in the landscape, and it may be worth reflecting on the degree to which the Wessex linear ditch systems clearly pre-date the Late Bronze Age/Earliest Iron Age transition of 850/750 BC (Bradley *et al.* 1994).

Large pits of traditional Iron Age type (not to be confused with wells and water holes) remain true to that established view; Hill's pit ritual tradition is intimately tied to these storage pits and hence to a concern with the control of agricultural and human reproduction (Hill 1996, 107). There was rapid uptake of another structural form from the ninth/eighth centuries BC onwards – the four- and six-post structures often regarded as granaries (Gent 1983). Very few such structures are unequivocally dated any earlier, and Gent's conclusion that the 'development of centralized food storage could have been an effective instrument of political policy' (*ibid.*, 259) thus would seem to pertain to a post-Bronze Age system.

Similarly, even if a few of the pieces of evidence for Bronze Age salt working hold up to scrutiny, they hardly erode the case for considerable escalation of production after the inception of the Iron Age. Lane and Morris (2001, 390–2) list just half a dozen (published) Bronze Age saltern sites. There are unequivocal Bronze Age contexts, notably the stratified Middle Bronze Age assemblage of briquetage fragments at Brean Down (Foster 1990), but other sites may need to be scrutinised; for example, Mucking North Ring bridges the transition to the Earliest Iron Age (above). The evidence for salt working at the Bronze Age enclosure of Billingborough, Lincolnshire, might also deceive the unwary; there is no good evidence from stratigraphy or dating that the activity preceded the transition there (Chowne *et al.* 2001).

Belief structures and mortuary practices would also repay re-examination in the light of the framework offered. Much has been made in recent years of the glimpsing of a burial tradition and other rites involving human remains for the Late Bronze Age, long obscure after the backdating of the Deverel-Rimbury complex (e.g. Burgess 1976; Brück 1995; Needham 1995). Yet again, it appears that very few of the individual contexts (for which there is secure evidence of human skeletal remains) need pre-date the transition here defined. We also need to look critically at the extent to which elements of the symbolic system of the earlier Iron Age outlined by

Parker Pearson (1996) had pre-late ninth century roots.

We might note the appearance in the Earliest Iron Age, on both sides of the Channel, of the distinctive rib and pellet motif on socketed axes recently discussed by Huth (2000). Huth has emphasised its almost exclusive occurrence on axes in every region in which it appears, and has suggested that it stands for the metalworkers themselves. This argument relies on the interlinking of a number of rather isolated clusters across Europe, but, if tenable, may say something about the changing status of metalsmiths at this crucial moment of change. Whatever the precise stimulus and meaning of this motif, it does seem possible that it forms part of a new symbolic order.

Potentially related to the issue of the switch in metals is the use of other raw materials for everyday implements, especially given the contrasting availability of metals before and after the transition. Site assemblages of the transition and after seem to spawn a wide range of bone instruments, some of them without obvious ancestry. With the added point that first millennium BC flint working is now fully accredited (e.g. Young and Humphrey 1999), it may be wondered whether these 'industries' burgeoned as a direct response to the changed role of bronze and perhaps even contributed to an altered system of control over the more limited bronze production that continued. Humphrey (this volume) has documented a large number of certain and possible Iron Age flint assemblages, and suggested that the stratigraphy at Potterne may show an inverse relationship between bronzes and flintwork.

One of the most poignant of material manifestations of the transition turns out to be the phenomenon of 'midden' accumulation. Setting aside the need to elucidate detailed formation processes (Needham and Spence 1997), there is a compelling concurrence of deposits that are refuse-rich, relatively deep and of dark earth character – 'anthropogenic soils' of a certain kind (e.g. McOmish 1996; Cunliffe 2000, 176; Lawson 2000; Ellis and Rawlings 2001). Several well-investigated sites (discussed above) and a number of less well-understood examples show these accumulations to date after 850/800 BC, being associated with Decorated pottery and sometimes Llyn Fawr bronzes or early ironwork. Securely dated are the dark earths at Potterne, East

Chisenbury, Balksbury, Wittenham Clumps, Runnymede and – on preliminary analysis – Welland Bank Quarry, Lincolnshire, where an archaeomagnetic date for a hearth is 650 ± 50 BC (T. Lane pers. comm.).

Almost certainly the same type of deposits and dating were revealed at All Cannings Cross (Cunnington 1923). I have also argued above that the main body of Unit 4 at Brean Down may date to this phase, as could the main refuse deposits spread across the island at Whitecross Farm, Wallingford, and the midden-filled hollow at Dunch Hill. There are other candidates and it is also intriguing to discover that on some, if not all, of these sites, there is evidence for a Late Bronze Age prelude of activity which generated less refuse but includes structural evidence. There is the suspicion, then, of a classic progression from a Late Bronze Age ‘occupation soil’ to an Earliest Iron Age ‘midden’. This same sequence was tentatively identified from small excavation trenches at Mount Batten, Plymouth (Cunliffe 1988).

It might also be wondered whether refuse-rich deposits late in the lifetime of the ringworks fall within the same broad phenomenon of high production and consumption within the ‘domestic’ sphere. Cases of variable confidence can be made for enhanced deposition at a late stage at Mucking North Ring, Springfield, Highstead, Thrapston and Carshalton. A goodly dump of Decorated pottery also featured in the uppermost silts of the Petters ditch, very plausibly part of an enclosure, as discussed above. It may be significant that the published pottery from Mucking South Rings is also predominantly of the Decorated phase, although the three radiocarbon dates for early ditch silts (all on mixed charcoal) might suggest a foundation in the full Late Bronze Age.

The evidence from the Thwing double ringwork in East Yorkshire is clearly for Late Bronze Age origins, but the detailed chronology of site development and the date of the bone and pottery concentration recovered from the inner ditch above a recut remains to be elucidated (Manby 1980, 321). At Grimthorpe, most of the pottery is from high in the ditch, above thick rubble deposits thought to derive from the collapse or levelling of the rampart; one of two key layers was described as dark earth (Stead 1968). The pottery would be consistent with an eighth century BC date, or

thereabouts. The oval enclosure at Rams Hill is also securely later Bronze Age and, yet again, the main phase of pottery deposition is late in the sequence (Bradley and Ellison 1975; Needham and Ambers 1994).

What is clear from this evidence is that the ringwork enclosures, mainly established very late in the Late Bronze Age, continued to be foci of attention across the transition. However, even though this sometimes involved re-cutting of the ditches, there was little concern to maintain them as prominent boundaries. Yet the locations remained strategically important, now for communal activities which saw much feasting and disposal, and the original functions of these monuments may have been lost or reworked. It may also be worth making the comparison with 'ditch levelling' accompanied by domestic refuse at other types of site, particularly earlier barrow ditches, as for example at Margate (Smith 1987).

Another intriguing aspect of this burgeoning of refuse creation is that more sites seem to conform to a conjunctive relationship perceptibly observed by Hingley over twenty five years ago (1978). He was able to document six examples of hillforts with large 'extramural' spreads of occupation within a kilometre of the ramparts. This may now be echoed by the enclosures at Mucking North Ring, East Chisenbury and Welland Bank (the latter lies just a kilometre from the Borough Fen double ringwork), while at Runnymede the enclosure element could have been the hypothesised adjacent Petters enclosure.

The long-lived roundhouse tradition undeniably passes across the Bronze Age/Iron Age divide, but even so it provides some interesting features at the transition/Earliest Iron Age. Pope (2003; this volume) has found that particularly large roundhouses are a feature of this phase in central and northern Britain. Niall Sharples (1998) had made the same observation previously for Wessex. Here is another new investment, this time directed towards making certain 'domestic' structures more ostentatious, perhaps a deflection from rituals of spectacle for the elite. The more stable phenomenon of 'the home', the stability perhaps connected to greater security of inheritance, was becoming, for the first time, a recognised arena of social competition, rather than just a locale for specified rituals within the daily and annual rounds, or within the specified life

cycle. Tied in with this is the new pattern of rebuilding the house on the same site, contrasting with the lateral shift of dwelling structures seen to be typical of the Bronze Age. This may be more than a subtle distinction: whereas in the Bronze Age the social compunction was to emphasise and make discrete the particular building/occupant association in a metaphorical relationship (Brück 1999), the transition brought a new form of memorising genealogy through the medium of domestic space. Now, very specifically, the *location* of the house took precedence in standing for ancestral history. This may have been tied to an emerging system of close family inheritance of the household and associated 'property' whereby the household dominated over kinship in the construction of society itself (Hill 1996, 104–7). It may be interesting to reflect on the extent to which the Bronze Age system had been inculcated in society by the spatial representations of genealogy recorded in earlier Bronze Age burial complexes.

Who had charge of the community's food produce was also at issue. It may be no coincidence that growing concern for the preservation of foodstuffs through salting is coeval with a rise in storage facilities of one kind or another. The development of the specialised husbandries that Serjeantson details (this volume) at least for the 'central place' sites of the transition and Earliest Iron Age can also be related to this process – sheep dairying was put to much better advantage through the addition of salt to prolong the storage life of cheese and butter. Even though it seems likely that these particular sites do not reveal the full regional economy because of the internal movement of particular species at particular growth stages, this should not invalidate the conclusion that there was sheep milking whereas earlier it had been rare to non-existent.

Stock movement itself adds a further dimension, in that the central places were attracting the culled lambs either as tribute or as part of the ingress of the wider community on a seasonal basis – namely early in the autumn. To elaborate speculatively on Serjeantson's model, it would be logical if the congregation of people during autumn and winter was accompanied by the congregation of their livestock. The local pastures and pannage might have had to be preferentially reserved for this season, but would be supplemented by stored fodder brought in from the

hinterland, one of the many storage requirements of the central sites. Returning some or all of the livestock to the central place each night would offer protection and the opportunity to milk those needing it. This could explain the dung contribution recognised in some of the 'middens' deposits. Serjeantson (this volume) also suggests that pig meat would be most advantageously used during the winter months, which could explain why some regions chose to promote pig populations, and why pig remains are represented especially well on the respective central sites. The pigs could of course benefit from the slops of the seasonally massed population.

All this suggests that food animals and stored food surplus were being used much more holistically in the construction of social relations (Barrett 1989) than had ever been the case in Bronze Age systems. For Barrett, 'the agricultural system was not the rational response of a social totality to given ecological conditions. Rather it was a complex field of action where people reproduced relations of affinity and obligation between themselves and others, and endowed the natural world with cultural values' (*ibid.*, 314).

This opens to question the extent to which agricultural produce was the foundation of Rowlands' (1980) inter-regional elite exchange in the later Bronze Age. Indeed, as Barrett remarked, 'the relationship between local production (food) and elite exchange of prestige metal objects remains... unclear' (Barrett 1989, 316). It may be that in the Bronze Age these different aspects of the economy were not integrated, that no reason was found to integrate them. Successful food production and success in evening out the seasonal vicissitudes were as crucial for a Bronze Age community to thrive as for any other. But the social environment offered no philosophy or mechanism by which it became logical to link that success *directly* to the acquisition of other benefits and advantages. Instead, it worked indirectly; for example, through the propagation of marriage partners for the inter-community sphere; through the ability to provide requisite hospitality; or by allowing population increase that could be advantageous in the assertion of rights over contested land, or against the threat of domination.

For the Iron Age, a more coherent case can be made for increased concern to maintain and improve fertility and productivity as a strategy of social reproduction. In the Earliest Iron Age, food surplus

became a direct instrument of political manipulation for the first time. This operated at more than one level; it could have both structured social relations within the community, and been a key medium in the mediation of inter-communal relations. The 'middened' accumulations that seem so characteristic of this period could reflect both of these levels simultaneously. The broad transformation described by Barrett (1989), Thomas (1997, 213) and others, from social power vested in the control of exchange networks, to that based on control of land and agricultural production, is very much a feature of the Late Bronze Age/Earliest Iron Age transition; indeed, it is perhaps the essence of that transition.

In conclusion – breaking the metal cycle

It can be suggested that, by the Late Bronze Age, the supra-utility roles of bronze far outweighed the sheer utilitarian ones. In other words, a high proportion of this bronze metalwork was circulating simply to satisfy the social requirements of the system. After centuries of dependence on it, bronze was a staple for all aspects of Bronze Age life, whether practical, structural, political or religious. In many and varied ways, bronze was the underlying currency of existence. It is this super-structure that was blown away at the transition, opening the way for political structures with an utterly different basis. Even the use of bronze for tools and weapons after the end of the ninth century BC was limited in scale; moreover, the rules of production, utilisation and consumption were largely rewritten. The transition is not so much about replacing bronze with iron, but rather, doing away with a *social value system* based heavily on bronze and creating a new system constructed in a wholly different way (Fig. 8). Other resources, like salt, agricultural produce and labour now came to play a much-increased role.

With the bronze standard abandoned, regional interdependence may still have been essential for the supply of such things as salt and specialist ceramics. In the higher echelons of society, it may still have been desirable to draw in marriage partners from outside. The arenas of social competition may now, however, have been relatively more parochial. They revolved around food production, its successful storage and redistribution, the latter in part at least

through the medium of feasting as manifested in the 'midden' sites. There were similar 'controls' on the processes of artefact production and distribution, perhaps involving community patronage. The urge to control had been switched from a bronze-dominant preoccupation to a more diverse mix of production, based on food, pottery and other local resources including iron. The interplay between interdependence and rivalry thus moved from the single dominant medium of bronze in the Late Bronze Age to a more complex base in the Earliest Iron Age.

The fundamental importance of the evolving ceramic repertoire was in creating networks of understanding in respect to both internal and external social relations. The ceramics took on a more central role in the process of establishing these relationships, both in the mode of production and distribution and in the patterns of consumption at the sites of large-scale social interaction and probably others also (Parker Pearson 1996). Of prime importance as the settings for this interaction are the refuse-rich, or 'midden', sites that seem essentially to characterise the ensuing Earliest Iron Age. Just as Sharples (this volume) sees the hillfort as a strong physical landmark of community, cooperation and pride, so could the midden complexes have assumed similar connotations for a comparable demographic unit (McOmish 1996; Needham and Spence 1996). The much discussed importance of food production and fertility in later prehistory, and particularly in the first millennium BC (e.g. Parker Pearson 1996), could account for the emerging symbolic importance of the great midden accumulations and a new appreciation of such material as having potency in specific propitiatory rituals. Thus, by degrees, developed the practice of using stored refuse in the act of decommissioning grain storage pits, for which on-going fertility was a perennial concern (Hill 1995; 1996).

Bronze in the Late Bronze Age	Social Value Systems based on	Iron in the Earliest Iron Age
Very abundant	Relative Quantity	Scarce
Low High-craftmanship Prescribing exclusive spheres of circulation	Intrinsic value material Enhanced object value established through:	High Novelty of skills involved and ? shortage of initiates
Equip whole community Amass stockpiles as form of wealth for exchange, or For consumption, ie. for display or ritual deposition	Overall stock exploitation	Limited options Emphasis on recycling to build up stocks Potential importance of display of rare material
Elites compete with neighbours Interlinks territories in an unified mode of competitive consumption Enhances flow of metal through networks well above demands of utility Enhances inter-regional interdependence and accompanying social ties	Inter-regional effects	Widespread distribution of iron sources and small quantity as yet in circulation may limit interregional effects, unless differential access to required skills

Fig. 8. Main features of the social value systems in relation to bronze in the Late Bronze Age and iron in the Earliest Iron Age.

These central places frequently emerged on sites which already had local importance towards the end of the Bronze Age, among them the ringworks. If the latter sites only came to be established at a very advanced stage of the Late Bronze Age proper, it may be that they themselves were a part of the catalytic process for sweeping change, rather than simply a constituent of the Late Bronze Age social landscape. One particular way in which this may be seen is in the reorientation of houses, for the prevailing easterly orientation of the Iron Age (Parker Pearson 1996) may indeed be another critical feature of the transition. Could it be that it in fact shows the adoption of a new cosmological order first expressed in the ceremonial ringworks, then emulated more widely? It is intriguing that the ninth century BC layout of Mucking North Ring has an east-west orientation, yet the houses still faced southeast despite the fact that two seem to be diminished representations of the enclosure itself.

Another consequence of the proposed model is that the high-status sites identified by Yates (1999) as focal to regional enclaves of field systems in the Thames valley and elsewhere probably only emerged very late in the period of some centuries over which these landscape configurations were defined. This makes it impossible to

view them as a part of the same regional economy for most of the later Bronze Age. Instead they were potentially a development *out of* the socio-economic system that created the 'fields' and the prelude to a new set of labour and food production relations. The bringing together of certain activities on such high-status sites, a phenomenon previously seen as belonging to the Late Bronze Age (Needham 1993), seems after all not to originate before a terminal stage.

If the proposed chronological relativities prove to be well grounded, then it is highly significant that the whirlwind of change was already under way before the abandonment of the bronze standard. This may suggest that it was not some unexpected turn of events in the international bronze economy that came to force societies in lowland Britain and elsewhere to respond in culturally dramatic ways. Yet large parts of northern and western Europe experienced the collapse or abandonment of the bronze standard at more-or-less the same time, which suggests that there were some developing pre-conditions, again on an international scale, creating a social environment that could contemplate making bronze redundant. It may be that the bronze system was indeed stretched to the limit of credibility by over-abundance and by vulnerability whilst in transit, and that societies began to explore other modes of prestige enhancement at both the local and inter-regional levels.

To begin with this might have been very particularised towards solving certain problems, but by degrees it may have insidiously undermined the relevance of the bronze system in many of its status-building modes. The 'preconditions' need not have been universal in either their nature or spatial distribution. The logic of the bronze system depended on its interconnectedness and general observance over large areas. This inevitably meant that any destabilising tendencies would have knock-on effects down the line; a chain reaction that could not have been rebuffed by any single cultural group even if particular responses to it were potentially quite varied. Intriguingly though, within lowland Britain there does not appear to have been massive variation. Although the ceramic assemblages of the Earliest Iron Age evince regional identities, this may be a replacement of identities formerly expressed through particular bronzes (notably axes) and, to a lesser degree, regional

hoarding practices. Overall, the Earliest Iron Age cultures of lowland Britain seem to have been as united in terms of material culture and behaviour as were Late Bronze Age cultures before.

The fact that I have reasserted fundamental differences between the final Bronze Age and the Earliest Iron Age should not be taken to justify a return to narrow studies on one or other side of the divide. On the contrary, more attention now needs to be focussed on how one system was transformed into the other and over what timescale.

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Bibliography

- Adkins, L. and Needham, S.P. 1985. New research on a Late Bronze Age enclosure at Queen Mary's Hospital, Carshalton, *Surrey Archaeological Collections* 76, 11–50.
- Atkinson, M. 1995. A Late Bronze Age enclosure at Broomfield, Chelmsford, *Essex Archaeology and History* 26, 1–24.
- Barclay, A. 1994. Prehistoric pottery, in Mudd 1994, 385–393.
- Barclay, A., Boyle, A. and Keevill, G.D. 2001. A prehistoric enclosure at Eynsham Abbey, Oxfordshire, *Oxoniensia* 66, 105–162.
- Barclay, A., Fell, V. and Wallis, J. 1995. An iron socketed axe from the river Thames, Buscot, Oxfordshire, *Oxoniensia* 60, 417–419.
- Barrett, J. 1980. The pottery of the later Bronze Age in lowland England, *Proceedings of the Prehistoric Society* 46, 297–320.
- Barrett, J. 1989. Food, gender and metal: questions of social reproduction, in Sørensen and Thomas 1989, 304–320.
- Barrett, J. and Bond, D. 1988. Pottery, in Bond 1988, 25–37.
- Barrett, J. and Bradley, R. (eds) 1980. *Settlement and Society in the British Later Bronze Age*. Oxford: British Archaeological Reports British Series

- Bell, M. 1990. *Brean Down Excavations 1983–87*. London: English Heritage Archaeological Report 15.
- Bond, D. 1988. *Excavation at the North Ring, Mucking, Essex: a Late Bronze Age Enclosure*. Chelmsford: East Anglian Archaeology Report 43.
- Bradley, R. 1983–5. Prehistoric pottery, in Johnston 1983–5, 26–28.
- Bradley, R. 1988. Hoarding, recycling and the consumption of prehistoric metalwork: technological change in western Europe, *World Archaeology* 20, 249–260.
- Bradley, R. 2001. Afterword: back to the Bronze Age, in Brück 2001, 229–231.
- Bradley, R. and Ellison, A. 1975. *Rams Hill: a Bronze Age Defended Enclosure and its Landscape*. Oxford: British Archaeological Reports British Series 19.
- Bradley, R. and Hall, M. 1992. Context, chronology and wider associations, in Moore and Jennings 1992, 71–82.
- Bradley, R. Entwistle, R. and Raymond, F. 1994. *Prehistoric Land Divisions on Salisbury Plain*. London: English Heritage Archaeological Report 3.
- Bradley, R., Lobb, S., Richards, J. and Robinson, M. 1980. Two Late Bronze Age settlements on the Kennet gravels: excavations at Aldermaston Wharf and Knight's Farm, Burghfield, Berkshire, *Proceedings of the Prehistoric Society* 46, 217–295.
- Brewster, T.C.M. 1963. *The Excavation of Staple Howe*. Wintringham: East Riding Archaeological Research Committee.
- Britton, D. 1968. The bronzes, in Cotton and Frere 1968, 204–218.
- Brown, G., Field, D. and McOmish, D. 1994. East Chisenbury midden complex, Wiltshire, in Fitzpatrick and Morris 1994, 46–49.
- Brown, N. 1988. A Late Bronze Age enclosure at Lofts Farm, Essex, *Proceedings of the Prehistoric Society* 54, 249–302.
- Brown, N. 1995a. Prehistoric pottery, in Atkinson 1995, 8–14.
- Brown, N. 1995b. Later Bronze Age and Early to Middle Iron Age pottery, in J.J. Wymer and N.R. Brown, *Excavations at North Shoebury: Settlement and Economy in South-east Essex, 1500 BC–AD 1500*, 77–88. Chelmsford: East Anglian Archaeology Report 75.
- Brück, J. 1995. A place for the dead: the role of human remains in Late Bronze Age Britain, *Proceedings of the Prehistoric Society* 61, 245–277.
- Brück, J. 1999. Houses, lifecycles and deposition on Middle Bronze Age settlements in southern England, *Proceedings of the Prehistoric Society* 65, 145–166.
- Brück, J. (ed.) 2001. *Bronze Age Landscapes: Tradition and Transformation*. Oxford: Oxbow Books.

- Buckley, D.G. and Hedges, J.D. 1987. *The Bronze Age and Saxon Settlements at Springfield Lyons, Essex: an interim report*. Chelmsford: Essex County Council Occasional Paper 5.
- Burgess, C.B. 1970. The Bronze Age, *Current Archaeology* 19, 208–215.
- Burgess, C.B. 1976. Burials with metalwork of the later Bronze Age in Wales and beyond, in G.C. Boon and J.M. Lewis (eds), *Welsh Antiquity: Essays mainly on Prehistoric Topics presented to H.N. Savory*, 81–104. Cardiff: National Museum of Wales.
- Burgess, C.B. 1979. A find from Boynton, Suffolk, and the end of the Bronze Age in Britain and Ireland, in Burgess and Coombs 1979, 269–282.
- Burgess, C.B. and Coombs, D.G. (eds) 1979. *Bronze Age Hoards: some Finds Old and New*. Oxford: British Archaeological Reports British Series 67.
- Champion, T.C. 1975. Britain in the European Iron Age, *Archaeologia Atlantica* 1, 127–145.
- Champion, T.C. 1980a. Settlement and environment in later Bronze Age Kent, in Barrett and Bradley 1980, 223–246.
- Champion, T.C. 1980b. Pottery in the first millennium BC, *Sussex Archaeological Collections* 118, 43–52.
- Champion, T.C. and Collis, J.R. (eds) 1996. *The Iron Age in Britain and Ireland: Recent Trends*. Sheffield: J.R. Collis publications.
- Chowne, P., Cleal, R.M.J. and Fitzpatrick, A.P. 2001. *Excavations at Billingborough, Lincolnshire, 1975–8: a Bronze–Iron Age Settlement and Salt-working Site*. Salisbury: East Anglian Archaeology Report 94.
- Clark, A.J. 2000. Archaeomagnetic dating, in Lawson 2000, 42.
- Clark, J.G.D. 1966. The invasion hypothesis in British archaeology, *Antiquity* 40, 172–189.
- Cotton, M.A. and Frere, S.S. 1968. Ivinghoe Beacon excavations, 1963–5, *Records of Buckinghamshire* 18, 187–260.
- Cromarty, A.M., Barclay, A., Lambrick, G. and Robinson, M. 2006. *Late Bronze Age Ritual and Habitation on a Thames Eyot at Whitecross Farm, Wallingford: the Archaeology of the Wallingford Bypass, 1986–92*. Oxford: Thames Valley Landscapes Monograph 22.
- Cunliffe, B. 1978. *Iron Age Communities in Britain* (2nd edn). London: Routledge.
- Cunliffe, B. 1988. *Mount Batten, Plymouth: a Prehistoric and Roman Port*. Oxford: Oxford University Committee for Archaeology Monograph 26.
- Cunliffe, B. 1991. *Iron Age Communities in Britain* (3rd edn). London: Routledge.
- Cunliffe, B. 2000. *The Danebury Environs Programme: the Prehistory of a Wessex Landscape, Vol. 1. Introduction*. Oxford: Oxford University Committee for Archaeology Monograph 48.

- Cunliffe, B. 2005. *Iron Age Communities in Britain* (4th edn). London: Routledge.
- Cunliffe, B. and Phillipson, D.W. 1968. Excavations at Eldon's Seat, Encombe, Dorset, *Proceedings of the Prehistoric Society* 34, 191–237.
- Cunnington, M.E. 1923. *The Early Iron Age Inhabited Site at All Cannings Cross Farm, Wiltshire*. Devizes: Simpson.
- Dalwood, H. 1987. An assemblage of bronze artefacts from Ivinghoe, Buckinghamshire, *Oxford Journal of Archaeology* 6, 29–42.
- Davies, S.M. 1981. Excavations at Old Down Farm, Andover, part II: prehistoric and Roman, *Proceedings of the Hampshire Field Club and Archaeology Society* 37, 81–163.
- Ehrenreich, R.M. 1994. Ironworking in Iron Age Wessex, in Fitzpatrick and Morris 1994, 16–18.
- Elgee, F. 1930. *Early Man in North-East Yorkshire*. Gloucester: privately published.
- Ellis, C.J. and Rawlings, M. 2001. Excavations at Balksbury Camp, Andover, 1995–97, *Hampshire Studies. Proceedings of the Hampshire Field Club and Archaeological Society* 56, 21–94.
- Ellis, P. 1989. Norton Fitzwarren hillfort: a report on the excavations by Nancy and Philip Langmaid between 1968 and 1971, *Somerset Archaeology and Natural History* 133, 1–74.
- Field, D. 2001. Place and memory in Bronze Age Wessex, in Brück 2001, 57–64.
- Fitzpatrick, A.P. and Morris E.L. (eds) 1994. *The Iron Age in Wessex: Recent Work*. Salisbury: Trust for Wessex Archaeology.
- Foster, J. 1990. Briquetage objects, in Bell 1990, 165–173.
- Fox, C. and Hyde, H.A. 1939. A second cauldron and an iron sword from the Llyn Fawr hoard, *Antiquaries Journal* 19, 369–404.
- Gent, H. 1983. Centralised storage in later prehistoric Britain, *Proceedings of the Prehistoric Society* 49, 243–267.
- Gingell, C.J. 1979. The bronze and iron hoard from Melksham and another Wiltshire find, in Burgess and Coombs 1979, 245–251.
- Gingell, C.J., Lawson, A.J. and Mortimer, C. 2000. Copper alloy objects, in Lawson 2000, 186–198.
- Green, H.S. 1981. The dating of Ivinghoe Beacon, *Records of Buckinghamshire* 23, 1–3.
- Greatorex, C. 2003. Living on the margins? the Late Bronze Age landscape of the Willingdon levels, in D. Rudling (ed.), *The Archaeology of Sussex to AD 2000*, 89–100. Great Dunham: Heritage Marketing and Publications.
- Guttmann, E.B.A. and Last, J. 2000. A Late Bronze Age landscape at South Hornchurch, Essex, *Proceedings of the Prehistoric Society* 66, 319–359.

- Hamilton, S. 1987. Late Bronze Age pottery, in D. Rudling, The excavation of a Late Bronze Age site at Yapton, West Sussex, 1984, *Sussex Archaeological Collections* 125, 53–63.
- Hamilton, S. and Manley, J. 2001. Hillforts, monumentality and place: a chronological and topographic review of first millennium BC hillforts in south-east England, *European Journal of Archaeology* 4, 7–42.
- Hawkes, C.F.C. 1935. The pottery from the sites on Plumpton Plain, *Proceedings of the Prehistoric Society* 1, 39–59.
- Hill, J.D. 1995. *Ritual and Rubbish in the Iron Age of Wessex*. Oxford: British Archaeological Reports British Series 242.
- Hill, J.D. 1996. Hill-forts and the Iron Age of Wessex, in Champion and Collis 1996, 95–116.
- Hingley, R. 1978. Excavations by R.A. Rutland on an Iron Age site at Wittenham Clumps, *Berkshire Archaeological Journal* 70, 21–55.
- Hodson, R. 1964. Cultural grouping within the British pre-Roman Iron Age, *Proceedings of the Prehistoric Society* 30, 99–110.
- Hull, G. 2000–1. A Late Bronze Age ringwork, pits and later features at Thrapston, Northamptonshire, *Northamptonshire Archaeology* 29, 73–92.
- Hulst, R.S. 1990. Archeologische Kroniek van Gelderland 1989, *Bijdragen en mededelingen Vereniging Gelre* 81, 185–208.
- Hulst, R.S. 1992. Archeologische Kroniek van Gelderland 1990–1, *Bijdragen en mededelingen Vereniging Gelre* 83, 171–188.
- Huth, C. 2000. Metal circulation, communication and traditions of craftsmanship in Late Bronze Age and Early Iron Age Europe, in Pare 2000, 176–193.
- Jackson, D. 2000–1. The prehistoric pottery, in Hull 2000–1, 78–82.
- Jackson, R.P.J. and Potter, T.W. 1996. *Excavations at Stonea, Cambridgeshire, 1980–85*. London: British Museum Press.
- Johnston, J. 1983–5. Excavations at Pingewood, *Berkshire Archaeological Journal* 72, 17–52.
- Kinnes, I.A. and Varndell, G. 1995. *‘Unbaked Urns of Rudely Shape’: Essays on British and Irish Pottery for Ian Longworth*. Oxford: Oxbow Monograph 55.
- Kristiansen, K. 1998. *Europe before History*. Cambridge: Cambridge University Press.
- Lane, T. and Morris, E.L. 2001. *A Millennium of Saltmaking: Prehistoric and Romano-British Salt Production in the Fenland*. Sleaford: Lincolnshire Archaeology and Heritage Reports Series 4.
- Lawson, A.J. 2000. *Potterne 1982–5: Animal Husbandry in Later Prehistoric Wiltshire*. Salisbury: Wessex Archaeology Report 17.
- Levinson, K.T. 1989. The introduction of iron in Denmark, in Sørensen and

- Thomas 1989, 440–456.
- Longley, D. 1991. The Late Bronze Age pottery, in Needham 1991, 162–212.
- Macphail, R.I. 2000. Soils and microstratigraphy: a soil micromorphological and microchemical approach, in Lawson 2000, 47–71.
- Manby, T.G. 1980. Bronze Age settlement in eastern Yorkshire, in Barrett and Bradley 1980, 307–370.
- Manning, W.H. and Saunders, C. 1972. A socketed iron axe from Maids Moreton, Buckinghamshire, with a note on the type, *Antiquaries Journal* 52, 276–292.
- McOmish, D. 1996. East Chisenbury: ritual and rubbish at the British Bronze Age–Iron Age transition, *Antiquity* 70, 68–76.
- Mephram, L. 2001. Pottery, in Ellis and Rawlings 2001, 40–50.
- Moore, J. and Jennings, D. 1992. *Reading Business Park: a Bronze Age Landscape*. Oxford: Thames Valley Landscapes, The Kennet Valley, Vol. 1.
- Morris, E.L., Gingell, C.J. and Williams, P.W. 2000. Pottery, in Lawson 2000, 136–177.
- Mudd, A. 1994. The excavation of a later Bronze Age site at Coldharbour Road, Gravesend, *Archaeologia Cantiana* 114, 363–410.
- Musson, C.R. 1991. *The Breiddin Hillfort: a Later Prehistoric Settlement in the Welsh Marches*. London: Council for British Archaeology Research Report 76.
- Needham, S.P. 1988. Industrial debris, in Bond 1988, 21–22.
- Needham, S.P. 1989. The clay mould assemblage, in Ellis 1989, 24–29.
- Needham, S.P. 1990. *The Petters Late Bronze Age Metalwork: an Analytical Study of Thames Valley Metalworking in a Settlement Context*. London: British Museum Occasional Paper 70.
- Needham, S.P. 1991. *Excavation and Salvage at Runnymede Bridge 1978: the Late Bronze Age Waterfront Site*. London: British Museum Press.
- Needham, S.P. 1993. The structure of settlement and ritual in the Late Bronze Age of south-eastern Britain, in C. Mordant and A. Richard (eds), *L'habitat et l'occupation du sol à l'Age du Bronze en Europe*, 49–69. Paris: Documents Préhistoriques 4.
- Needham, S.P. (with a contribution from J. Conheaney) 1995. A bowl from Maidscross, Suffolk: burials with pottery in the Post Deverel-Rimbury period, in Kinnes and Varndell 1995, 159–171.
- Needham, S.P. 1996a. Chronology and periodisation in the British Bronze Age, in K. Randsborg (ed.), *Absolute Chronology: Archaeological Europe 2500–500 BC*, 121–140. Copenhagen: Acta Archaeologica 67.
- Needham, S.P. 1996b. The Late Bronze Age pottery: style, fabric and finish,

- in Needham and Spence 1996, 106–164.
- Needham, S.P. 1996c. Post Deverel-Rimbury pottery, in Jackson and Potter 1996, 245–257.
- Needham, S.P. 1996d. The Bronze Age metalwork and metallurgical debris, in Jackson and Potter 1996, 257–260.
- Needham, S.P. 1998. Modelling the flow of metal in the Bronze Age, in C. Mordant, M. Pernot and V. Rychner (eds), *L'Atelier du Bronzier en Europe du XX^e au VIII^e siècle avant notre ère, III: Production, Circulation et Consommation du Bronze*, 285–307. Paris: Comité des Travaux Historiques et Scientifiques.
- Needham, S.P. and Ambers, J. 1994. Redating Ram's Hill and reconsidering Bronze Age enclosure, *Proceedings of the Prehistoric Society* 60, 225–243.
- Needham, S.P., Ramsey, C.B., Coombs, D., Cartwright, C. and Pettitt, P. 1997. An independent chronology for British Bronze Age metalwork: the results of the Oxford Radiocarbon Accelerator programme, *Archaeological Journal* 154, 55–107.
- Needham, S.P. and Spence, T. 1996. *Refuse and Disposal at Area 16 East, Runnymede (Runnymede Bridge Research Excavations 2)*. London: British Museum Press.
- Needham, S.P. and Spence, T. 1997. Refuse and the formation of middens, *Antiquity* 71, 77–90.
- Needham, S.P., Woodward, A. and Ambers, J. forthcoming. Eldon's Seat: refining the Bronze Age sequence.
- O'Connell, M. 1986. *Petters Sports Field, Egham: Excavation of a Late Bronze Age/Early Iron Age Site*. Guildford: Surrey Archaeological Society Research Volume 10.
- Palmer, S.C. 1999. Archaeological Excavations in the Arrow Valley, Warwickshire, *Transactions of the Birmingham and Warwickshire Archaeological Society* 103.
- Pare, C. 1991. *Swords, Wagon-graves and the Beginning of the Early Iron Age in Central Europe*. Marburg: Kleine Schriften aus dem Vorgeschichtlichen Seminar Marburg 37.
- Pare, C. (ed.) 2000. *Metals Make the World go Round: The Supply and Circulation of Metals in Bronze Age Europe*. Oxford: Oxbow Books.
- Parker Pearson, M. 1996. Food, Fertility and front doors in the first millennium BC, in Champion and Collis 1996, 117–132.
- Pearson, W.P. and Stuiver, M. 1986. High precision calibration of the radiocarbon time scale, 500–2500 BC, in M. Stuiver and R.S. Kra (eds), *Proceedings of the 12th International ¹⁴C Conference, Radiocarbon 28 (2B)*, 839–862.
- Pope, R.E. 2003. *Prehistoric Dwelling: Circular Structures in North and Central*

- Britain c. 2000 BC–AD 500. Unpublished Ph.D. thesis, University of Durham.
- Rigby, V. 2005. *Pots and Pits: the British Museum East Yorkshire Settlements Project, 1988–1992*. Hull: East Riding Archaeological Society.
- Rohl, B. and Needham, S.P. 1998. *The Circulation of Metal in the British Bronze Age: the Application of Lead Isotope Analysis*. London: British Museum Occasional Paper 102.
- Rowlands, M.J. 1980. Kinship, alliance and exchange in the European Bronze Age, in Barrett and Bradley 1980, 15–55.
- Russell, M.J.G. 1989. Excavation of a multi-period site in Weston Wood, Albury: the pottery, *Surrey Archaeological Collections* 79, 3–51.
- Savory, H.N. 1980. *Guide Catalogue of the Bronze Age Collections*. Cardiff: National Museum of Wales.
- Sharpley, N. 1998. Houses: building power relationships. Paper presented to the Prehistoric Society conference, *At the End of the Bronze Age*.
- Smith, G.H. 1987. A Beaker (?) burial monument and a Late Bronze Age assemblage from East Northdown, Margate, *Archaeologia Cantiana* 104, 237–285.
- Smith, R.A. 1928. Pre-Roman remains at Scarborough, *Archaeologia* 77, 179–200.
- Snodgrass, A.M. 1989. The coming of iron in Greece: Europe's earliest Bronze/Iron transition, in Sørensen and Thomas 1989, 22–35.
- Sørensen, M.L.S. and Thomas, R. (eds) 1989. *The Bronze Age–Iron Age Transition in Europe: Aspects of Continuity and Change in European Societies, c. 1200–500 BC*. Oxford: British Archaeological Reports International Series 483.
- Stead, I.M. 1968. An Iron Age hill-fort at Grimthorpe, Yorkshire, England, *Proceedings of the Prehistoric Society* 34, 148–190.
- Thomas, R. 1989. The Bronze-Iron transition in southern England, in Sørensen and Thomas 1989, 263–286.
- Thomas, R. 1997. Land, kinship relations and the rise of enclosed settlement in first millennium BC Britain, *Oxford Journal of Archaeology* 16, 211–218.
- Thomas, R., Robinson, M., Barrett, J. and Wilson, B. 1986. A Late Bronze Age riverside settlement at Wallingford, Oxfordshire, *Archaeological Journal* 143, 174–200.
- Van Heeringen, R.M. 1998–9. Burial with a Rhine view: the Hallstatt situla grave on the Koerheuvel at Rhenen, *Berichten van de Rijksdienst voor het Oudheidkundig Bodemonderzoek* 43, 69–97.
- Wainwright, G. J. and Davies, S.M. 1995. *Balksbury Camp, Hampshire: Excavations 1973 and 1981*. London: English Heritage Archaeological

Report 4.

- Waugh, H. 1968. The pottery, in Cotton and Frere 1968, 219–234.
- Woodward, A. 1989. The prehistoric pottery, in Ellis 1989, 39–53.
- Woodward, A. 1990. The Bronze Age pottery, in Bell 1990, 121–145.
- Woodward, A. 1995. Vessel size and social identity in the Bronze Age of southern Britain, in Kinnes and Varndell 1995, 195–202.
- Worsfold, F.H. 1943. A report on the Late Bronze Age site excavated at Minnis Bay, Birchington, Kent, 1938–40, *Proceedings of the Prehistoric Society* 9, 28–47.
- Yates, D. 1999. Bronze Age field systems in the Thames valley, *Oxford Journal of Archaeology* 18, 157–170.
- Yates, D. 2001. Bronze Age agricultural intensification in the Thames valley and estuary, in Brück 2001, 65–82.
- Young, R. and Humphrey, J. 1999. Flint use in England after the Bronze Age: time for a re-evaluation? *Proceedings of the Prehistoric Society* 65, 231–242.

Llyn Fawr metalwork in Britain: a review

Brendan O'Connor

In memoriam David Coombs

This paper examines the various hoards belonging to the Llyn Fawr phase of the British Bronze Age – for which other scholars now prefer the term Earliest Iron Age (e.g. Cunliffe 2005; Needham this volume) – and provides an up-to-date list of relevant finds ([Appendix 1](#)). It will then consider the significance of the axes, swords and razors belonging this phase, and review the dating – 800 to around 600 BC – with reference to the latest chronology for Hallstatt C on the Continent. Finally, the implications of the disappearance of certain bronze types during the Llyn Fawr phase for the adoption of iron are briefly discussed.

Hoards

At a seminar on the Bronze Age to Iron Age transition held in Durham in 1983, Thomas listed 21 hoards of the Llyn Fawr phase/Late Bronze Age 4 from southern Britain (Thomas 1989, 281–2).¹ We can set aside four of these finds as containing mostly Ewart Park/Late Bronze Age 3 material (see [Appendix 1](#)). Since then, Northover (1988, fig. 42) has added two further Llyn Fawr hoards from south-west England – Carn Brea and Kings Weston Down ([Appendix 1](#), nos 1, 3) – and Taylor (1993) a third – Weymouth ([Appendix 1](#), no. 11). In his list of Early Iron Age hoards from England, Huth (1997, 273–5, nos 2, 8, 9 and 21) identified four more – Gwinear, ‘Gloucestershire’, Eastbourne and Ferring – including part of the Netherhampton hoard ([Appendix 1](#), nos 2, 14,

21–2).

Three new hoards have since emerged – Fawley, Tower Hill and East Rudham ([Appendix 1](#), nos 18, 20 and 26) – making a total of 27 from southern England and Wales, not counting associations of swords or chapes alone. Although the Netherhampton hoard was not deposited before 200 BC (Stead 1998, 118), it contains so much material characteristic of Late Bronze Age 4 that it would be perverse to ignore it. This information is consolidated in [Appendix 1](#) and [Figure 1](#).

The southern distribution of Late Bronze Age 4 hoards is concentrated in Wessex: there are 14 from Dorset, Wiltshire, Hampshire, the Isle of Wight and the Berkshire Downs. There are two westerly outliers in Cornwall – where two Armorican axes ‘found together’ at St Erth (Pearce 1983, 406 no. 44, pl. 4) may constitute another hoard; four to the north, in Bristol and south Wales; and four to the east, in Sussex and Surrey. Detached from the main distribution are two hoards in Norfolk and one in Cambridgeshire. The recent finds reinforce Thomas’ (1989, 272) point that there was an increase in the amount of bronze deposited in Wessex during Late Bronze Age 4, in contrast to the reduction in other parts of Britain. However, the casting jet and fragmentary axes present at Kings Weston, Danebury and Tower Hill ([Appendix 1](#), nos 3, 15 and 20) do not support his argument that scrap hoards had gone out of use during this period (*ibid.*, 273).

We can also note the absence of Llyn Fawr hoards from parts of south-east England which are rich in Ewart Park metalwork, notably Kent, Essex (Cuddeford and Sealey 2000, 15), and Suffolk (Pendleton 1999, 30), although a new hoard from Bramford, Suffolk, appears to be of transitional Late Bronze Age 3–4 date, containing some socketed axes with features characteristic of the Sompting type, and a linear-faceted axe (Pendleton forthcoming). The presence of typologically late axes in Late Bronze Age 3 hoards from East Anglia has previously been noted (Coombs 1979, 261 n.6; O’Connor 1980, 231). The two winged chapes from Coplow Farm, Undley in Suffolk (*ibid.*, list 236, nos 4–5, fig. 75, 4–5; Pendleton 1999, 127, H16) relate to the distribution of swords, rather than hoards.

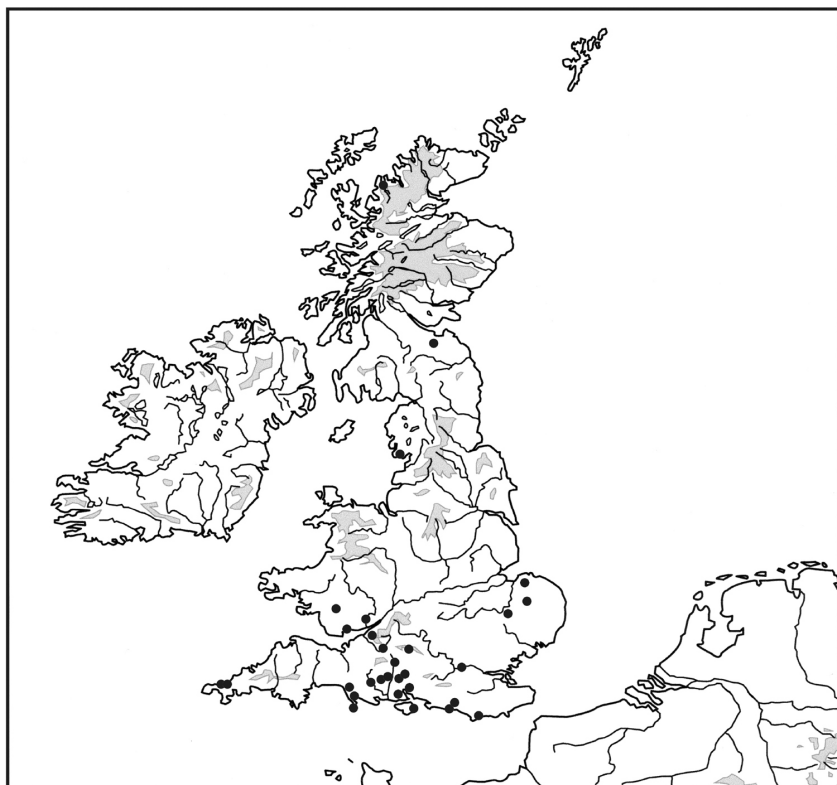


Fig. 1. Llyn Fawr hoards.

At Flag Fen, Cambridgeshire, where the deposition of bronzes reached a peak in the Wilburton/Ewart Park period and continued during the Iron Age, Llyn Fawr material is scarce (Coombs 2001, 287, 293, nos 60, 200–202, 205, 211; Rohl and Northover 2001, 301); the socketed axe dated to Late Bronze Age 4 by Coombs (2001, fig. 10.6, 60) is a typologically early form. In Kent, recent finds of Ewart Park hoards highlight the importance of the Isle of Thanet during the Late Bronze Age (e.g. Perkins *et al.* 1994, 289–97; Hearne *et al.* 1995, 274–7; Perkins 1997, 232–7), but there are no Llyn Fawr hoards.

This decline of hoarding in south-eastern England was matched across the Channel in northern France (Blanchet 1984, 378; Huth 1997, Karten 2, 4, 16–17).

Northover has explained the proliferation of Late Bronze Age 3 hoards in south-east England as the result of a surplus of metal from

France and suggested that reduction in these imports at the transition to Late Bronze Age 4, perhaps associated with the removal of metal from circulation for deposit in Armorican axe hoards, reduced the surplus and removed the need to deposit hoards in south-east England (Northover 1984, 128–30, 140). He does not explain these changes by the introduction of iron.

Llyn Fawr hoards appear to be absent from the Midlands, unless the gouge, chisel and sword from Brogytyn near the Welsh border in Shropshire were really associated (Savory 1980, 123 no. 288, fig. 44). All three types were current during Late Bronze Age 4 – the tanged chisel can be compared to an example from Danebury – but Colquhoun and Burgess (1988, 119 no. 732) follow Chitty (1940, 151–4) in denying association. In Lincolnshire we have two Gündlingen swords from Billingham. Although not a hoard, we must note the recent excavation from a cremation deposit in a ring ditch of the remains of at least two cauldrons of Class B2 from Broom, Warwickshire (Watson 1999). Apart from shedding new light on burial practice, this find provides scarce, if not especially informative, radiocarbon dates for Late Bronze Age 4: 840–520 and 790–410 cal. BC (Palmer 1999, 53, 55; Needham *et al.* 1997, 98).

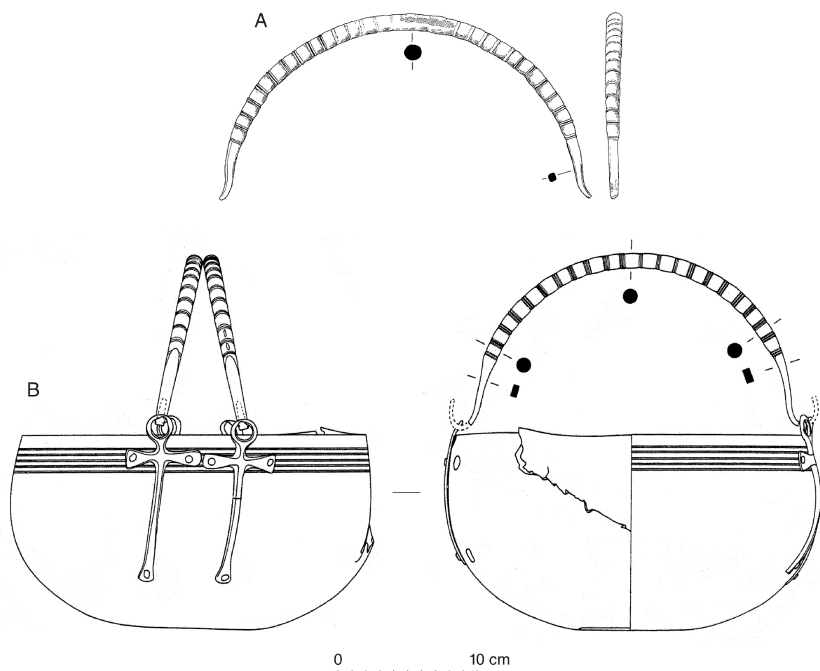


Fig. 2. A. Handle of cruciform handle-attachment bowl, Rotsea, East Yorkshire (courtesy of T.G. Manby). B. Cruciform handle-attachment bowl, Venlo, Limburg, Netherlands (after Roymans 1991).

In northern England, we have one undoubted Llyn Fawr hoard from Skelmore Heads ([Appendix 1](#), no. 28), besides the two Gündlingen swords (Colquhoun and Burgess 1988, nos 707, 713) and a chape (O'Connor 1980, list 235, 7) from Ebberston, North Yorkshire (Manby 1980, 357, fig. 15, 1–3; Gerdson 1986, 191, no. 18). The Roseberry Topping hoard, North Yorkshire, is presumably transitional from Late Bronze Age 3, since Schmidt and Burgess identify its mould as for Sompting axes (1981, 246, no. 1608, pl. 148D).

Still in northern England, we can now identify the so-called 'bucket handle' from Rotsea, East Yorkshire ([Fig. 2A](#)), as the handle of a cruciform handle-attachment bowl of von Merhart's (1969) group C, by comparison with the handles of the vessel from Venlo, Limburg, in the Netherlands ([Fig. 2B](#); Roymans 1991, 42–3, fig. 15a). Group C bowls originated around the head of the Adriatic and have been found in both Hallstatt C and D contexts (*ibid.*, fig. 16; Chaume and Feugère 1990, 34–6). Roymans (1991, tables 4 and 6) favours a Hallstatt C date for Venlo on the basis of other imported bronze vessels on the lower Rhine. These include the ribbed pail in the wagon grave at Wijchen, whose identification (O'Connor 1980, 428, fig. 73D, 1–2) has been confirmed by more recent studies (Roymans 1991, 39–42, fig. 15b; Pare 1992, 220, pl. 6A, 1–7 and 12–13; Warmenbol 1993, 96 n.52, fig. 9). Roymans (1991, table 5) places Wijchen in Hallstatt C, Pare (1992, 151) perhaps at the transition to Hallstatt D, but other scholars place it in Hallstatt D (Warmenbol 1993, 104–5; Lanting and Van der Plicht 2001–2, 173; see also Fontijn and Fokkens this volume). This imprecision is unfortunate, since the date of Wijchen should also influence the chronology of the British ribbed pail from Weybridge (O'Connor 1980, 251–2; Stead 1984, 43–4, pl. 1a; Jope 2000, 13, 228, pls. 10, 11a). While the vessel comparable to Weybridge in grave 910 at Hallstatt itself can be dated to Hallstatt C (Prüssing 1991, 85, 87, no. 322), we cannot be sure whether the Rotsea and Weybridge vessels reached Britain before Hallstatt D.

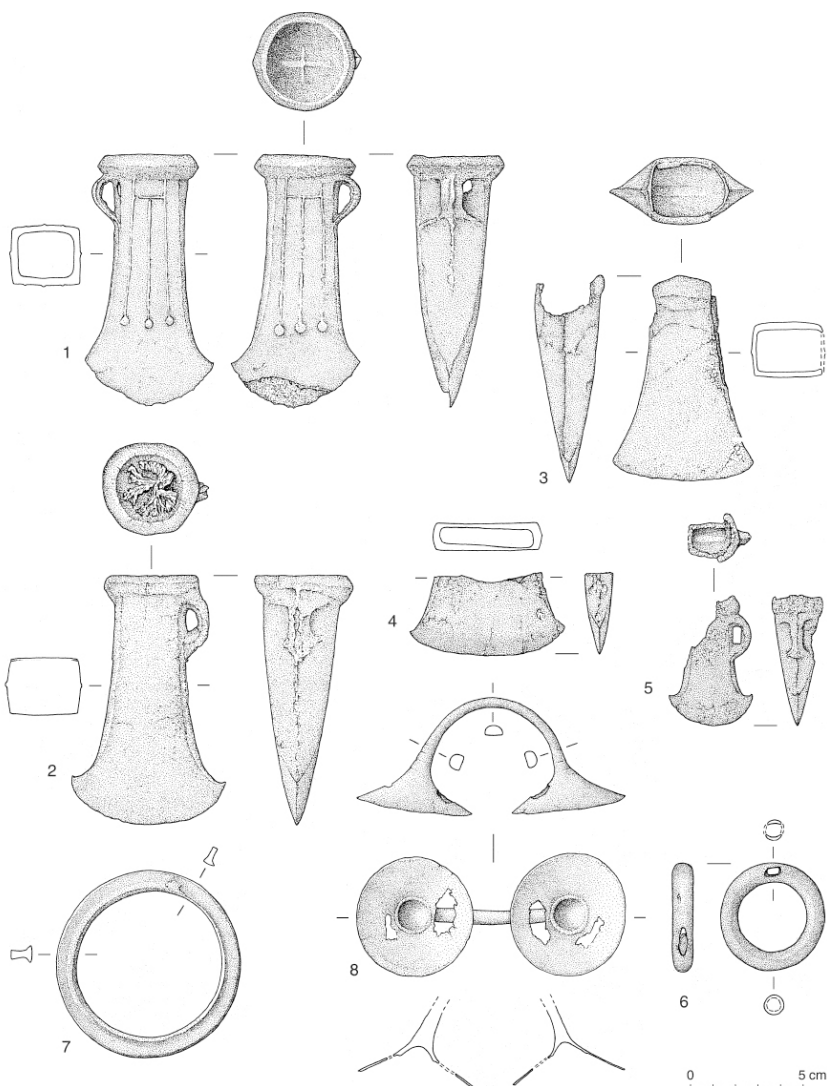


Fig. 3. Poolewe hoard, Easter Ross (drawing: Marion O'Neill, reproduced courtesy of the Trustees of the National Museums of Scotland).

Beside the Armorican axes from Lamancha ([Appendix 1](#), no. 29), and leaving aside for now the two Sompting axes from Tillicoultry mentioned below, the only other Llyn Fawr hoard from Scotland appears to be Poolewe ([Appendix 1](#), no. 30; [Fig. 3](#)). A Hallstatt C date for the fragmentary bronze vessel from the Adabrock hoard, Lewis, is uncertain (Thrane 1978, 16; O'Connor 1980, 422; Borgna

1999, 162). Late Bronze Age 4 metalworking took place in Scotland, as indicated by the Sompting axe moulds from Rosskeen, Easter Ross (Schmidt and Burgess 1981, nos 1609–10). Scotland has also produced woodworking evidence from Oakbank Crannog in Loch Tay which suggests that iron socketed axes were used during this phase (Sands 1997, 86).

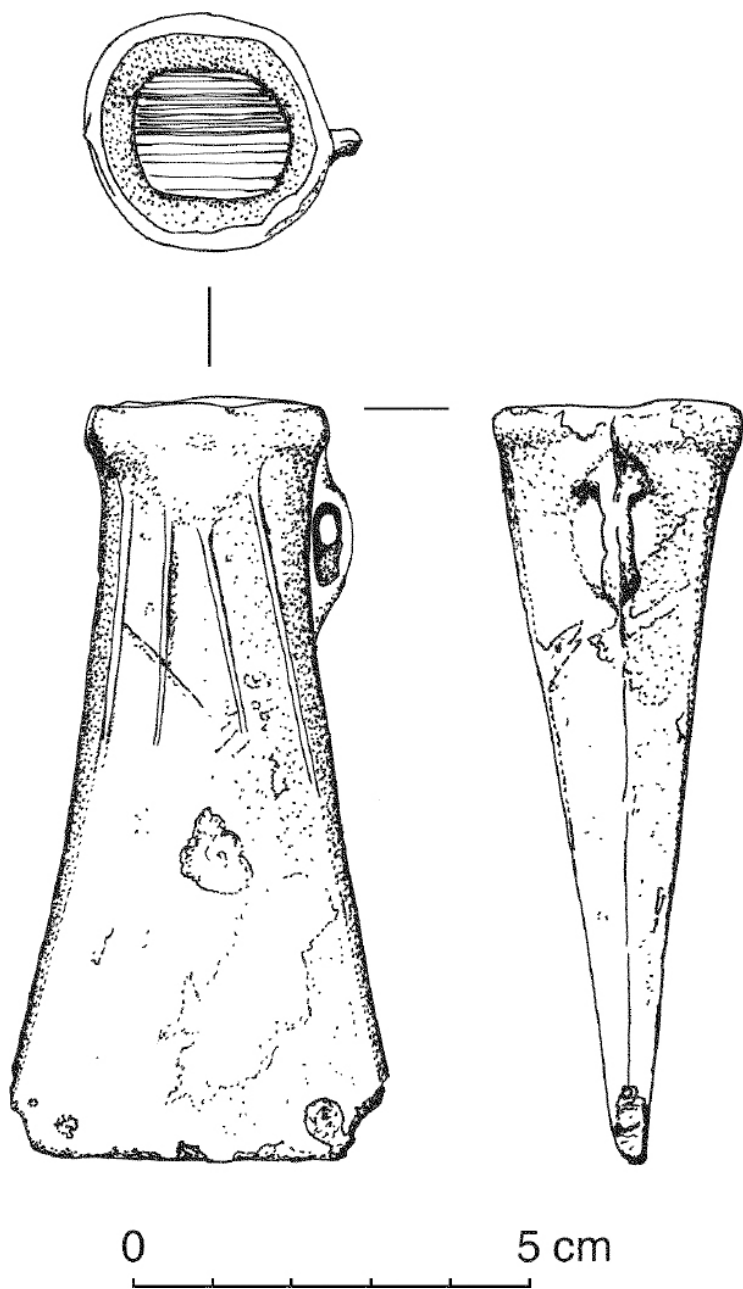


Fig. 4. Linear-faceted axe, Thorney Down hoard, Wiltshire (drawing courtesy of Wessex Archaeology).

Axes

Most Llyn Fawr hoards are made up entirely of axes. Seven appear to consist entirely of Armorican socketed axes ([Appendix 1](#), nos 2, 6, 16–19, 29), although losses may conceal other types. Apart from Tintern and Lamancha, these seem to be relatively large hoards. Carn Brea contains Armorican axes and perhaps other types. All five Dorset hoards ([Appendix 1](#), nos 7–11) appear to consist of linear-faceted axes ([Fig. 4](#)), while 141 of the 173 socketed axes from Netherhampton, south Wiltshire, are said to resemble those from Dorset (Stead 1998, 113, pl. 17, right; MacGregor 1987, 17–19, 105, pl. 9). The three East Anglian hoards consist entirely of linear-faceted axes ([Appendix 1](#), nos 25–27). Figheldean Down, Eastbourne and Kingston ([Appendix 1](#), nos 12, 21, 24) consist of Sompting axes and there are many in the Tower Hill hoard ([Appendix 1](#), no. 20).

Single finds of linear-faceted axes occur mainly in the same areas of East Anglia and Wessex as the hoards (O'Connor 1980, map 76). Apart from three examples from Yorkshire (Schmidt and Burgess 1981, nos 1643–5), they do not occur in northern Britain, unlike Armorican and Sompting axes. Northover (1988, 76–9, fig. 41) has mapped Armorican axes, showing groups of single finds along the south coast, especially in Cornwall. He contrasts the use and deposition of British finds with those from France, pointing out that British examples were not necessarily non-functional (although Dorset linear-faceted axes were), and concludes that imported Armorican axes contributed to the supply of raw material for metalworking in south-western England during Late Bronze Age 4 (*ibid.*, 85), although probably not on a large scale (Rohl and Needham 1998, 110). Burgess' map of Sompting axes (1967–70, fig. 2) – including related decorated forms perhaps earlier than Late Bronze Age 4 – shows a distribution from the Channel to the Pentland Firth, with concentrations in the Thames valley and East Anglia. The hoards from Figheldean, Danebury, Kings Weston and Tower Hill fill out the distribution of Sompting axes in Wessex, but these still appear to be absent from Cornwall. Rib-and-pellet ornament is common on linear-faceted and Sompting axes, often non-functional, and has been related to metalworking and exchange by Huth (2000, 182–4).

Among the drawings in the Albert Way manuscripts in the Library of the Society of Antiquaries of London are two Sompting axes ‘found in a sandpit at Tillicoultry’, Clackmannanshire, which can probably be identified as those exhibited to the Royal Archaeological Institute on 7 November 1856 (*Archaeological Journal* 13, 1856, 412). They will be fully published elsewhere.

Swords

Since Gündlingen swords are amongst the characteristic components of Llyn Fawr metalwork, their absence from hoards, apart from Ferring, is striking. We should however, note the recent discovery of a hilt fragment ‘near the nucleus of a “Ewart Park” and “Carps Tongue” founder’s hoard’ at North Tuddenham, Norfolk (CMAL 2003, 27, fig. 17; DCMS 2002, 74; additional information kindly provided by K. Hinds), and await full publication of this important find.

The distribution of Gündlingen swords in southern Britain is mainly confined to the Thames valley. They are absent from Wessex, the South-West and south Wales, where Llyn Fawr hoards are common (Fig. 5). This pattern does not differ significantly from the easterly distribution of earlier bronze swords in Britain, although it has been significantly amplified by the recent find from the River Severn at Jackfield, Ironbridge in Shropshire (Bell and Watson 1993, 104–6, fig. 2). Amendments to the published provenances of two Gündlingen swords may be noted: ‘near Culloden Moor’ (Colquhoun and Burgess 1998, no. 730) is probably from Cantray, east of Culloden in Strathnairn, while ‘Wilton’ (*ibid.*, no. 735) is a misprint for Witton (Lawson 1983, 30, 35, fig. 27). The iron sword from Llyn Fawr itself (Appendix 1, no. 5) is a conspicuous outlier from the continental distribution of Mindelheim weapons concentrated in southern Germany and Bohemia (Pare 1999, 309) and is also remote from British finds of bronze Hallstatt swords (Fig. 6).

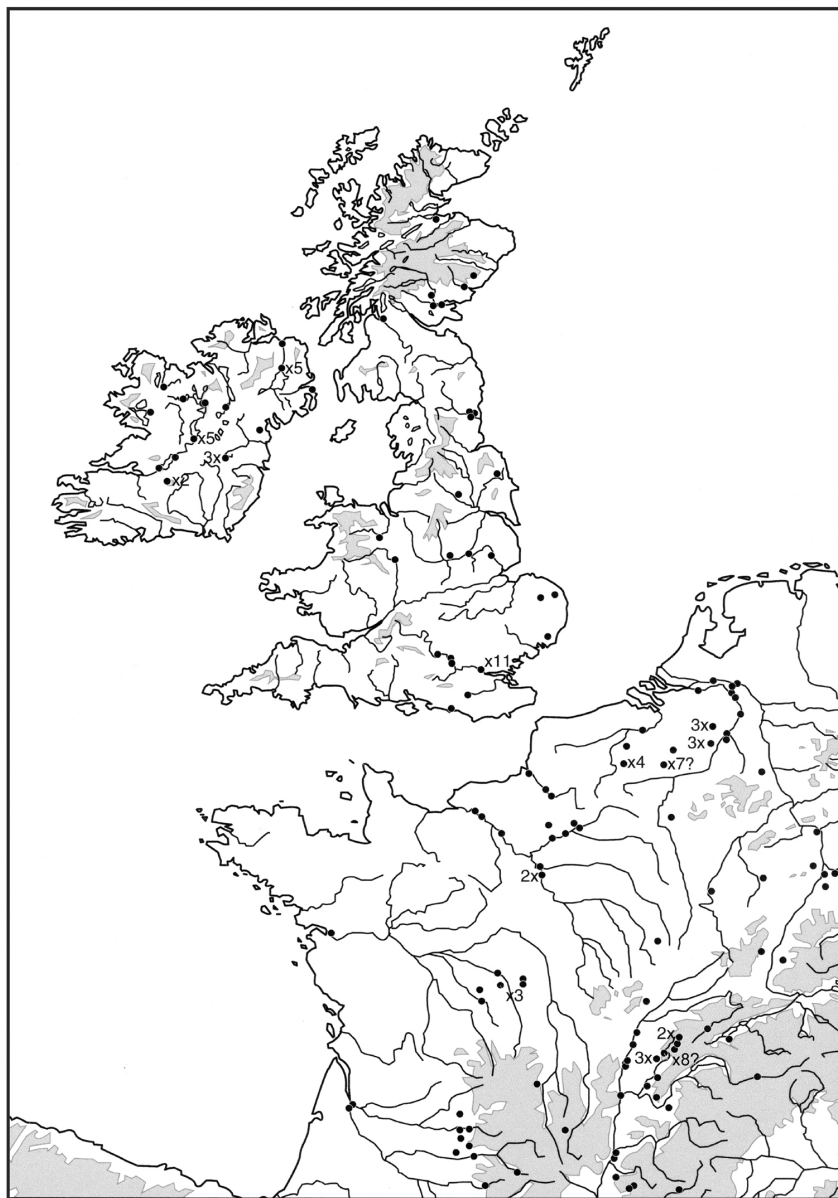


Fig. 5. Hallstatt bronze swords (courtesy of Laurent Dhennequin).

background has been set out in Jockenhövel's (1971; 1980) corpus of bronze razors from central and western Europe, which shows an overall distribution concentrated in southern and eastern France, with bronze razors rare east of the Rhine (Jockenhövel 1971, Taf. 51C–D). A dozen subsequent British finds are listed in [Appendix 2](#).

The overall distribution of double-edged razors dated to Hallstatt C on the Continent is evenly spread (Jockenhövel 1980, Taf. 54A–55B), but his Wiesloch, Gramat and Havré types are most common in Belgium and Britain (*ibid.*, 137–40), with Gramat and Havré razors in the hoards from Danebury and Cardiff (*ibid.*, nos 475, 478; [Appendix 1](#), nos 4, 15). The distribution of Havré razors can now be extended to include the Channel Islands ([Appendix 2](#), no. 11). Further Wiesloch and Gramat razors have been found in the Netherhampton hoard ([Appendix 2](#), no. 1), while Ellesborough ([Appendix 2](#), no. 4) is at least related to the Wiesloch type.

Many of Jockenhövel's Hallstatt single-edged razors are confined to southern and central France, in particular the crescentic forms (Jockenhövel 1980, Taf. 55B–58; Giraud *et al.* 2003, 107–10). The Unterstall and Flörsheim types, not hitherto identified in Britain (Jockenhövel 1980, 176–7), are now represented here by recent finds from St Albans and Soham ([Appendix 2](#), nos 5–6). A Flörsheim razor has been reported from La Grande Paroisse, Seine-et-Marne (Blanchet 1993, 67; Pare 1999, 306, n. 765). The pottery in the eponymous Flörsheim burial is transitional late Urnfield/early Hallstatt, and Pare places trapezoidal razors very early in Hallstatt C (*ibid.*, 304, n. 767).

The Feldkirch and Bernissart types have a more northerly distribution, including Britain and Belgium (Jockenhövel 1980, 173–5): there are additional finds from Netherhampton and Martlesham ([Appendix 2](#), nos 1, 9), perhaps also Slade Farm ([Appendix 2](#), no. 2), and in northern France from the River Oise at Saint-Leud'Esserent (Blanchet 1984, 386, fig. 216) and another site at La Grande Paroisse (Blanchet 1993, 67, fig. 48.9). Other single-edged forms appear to be confined to Britain (Jockenhövel 1980, nos 719–21, 776). This confirms Meyer's (1984–5, 73–4) conclusion that most so-called 'Hallstatt' razors in Britain were not imports and Warmenbol's connection of the Belgian finds to Britain rather than to central Europe (Warmenbol 1988, 252–5; 1993, 108).

Single-edged blades from Potterne, Wiltshire (Gingell *et al.* 2000, 189, fig. 69, 4), and a ring ditch at East Northdown, Margate, Kent (Smith 1987, 268, fig. 18, M4), have been published as possible Hallstatt razors (see also Needham this volume), although the former in particular seems to the present writer more characteristic of late Urnfield than Hallstatt types. This uncertainty highlights the need for a thorough reassessment of the enlarged corpus of Llyn Fawr razors.

Crescentic iron razors were used increasingly in the west Hallstatt area during Hallstatt C and replaced bronze in Hallstatt D (Warmenbol 1988, 243; Chaume and Feugère 1990, 30–1; Baitinger 1999, 93–4, Liste 14). A single-edged tanged blade of iron from Dinorben, Denbighshire, has been compared with Hallstatt bronze razors (Gardner and Savory 1964, 153–4, fig. 23, 3).

Chronology

The Llyn Fawr phase in Britain is normally related to Hallstatt C on the Continent, but there have been significant changes to the relative and absolute chronology of the Early Iron Age in central Europe as we understood it twenty years ago (Burgess 1979, 271–3, fig. 15A; O'Connor 1980, 33, 272). The current position is admirably summarised by Müller *et al.* (1999, 88, fig. 5) in their review of the Swiss Iron Age. The end of the Late Bronze Age in western Switzerland and adjacent parts of France can now be set before the end of the ninth century BC (Hennig 2001, 85). Lanting and Van der Plicht (2001–2, 134–5) give dates of 2650–2450 BP or 800–625 BC for Hallstatt C.

The key site for the start of Hallstatt C is barrow 8 in the Hexenberg group at Wehringen, Lkr. Augsburg, Bavaria (Pare 1992, 315–7 no. 145, pl. 95B–97A; Hennig 2001, 259–68, Taf. 107–14, 162, Farbtaf. II–IV, 1). Pare had already interpreted this wagon burial as typologically transitional between Hallstatt B3 and Hallstatt C when he was vindicated by a felling date of 778 ± 5 BC for timber from the wagon and the burial chamber (Friedrich and Hennig 1996; Hennig 2001). The Wehringen wagon resembled more closely those of the Late Bronze Age than the wagons characteristic of Hallstatt C. Its Gündlingen sword and winged chape are unusual for Hallstatt C wagon graves in Bavaria, where iron Mindelheim

swords are normal; nor are Gündlingen swords usually associated with the rich horse gear characteristic of Hallstatt C1 over a wider area.

The Wehringen pottery mixes Urnfield and Hallstatt forms, while the gold bowl is also a Late Bronze Age type. The burial rite, however, with a wagon accompanied by lavish grave-goods in a wooden chamber under a large mound, is typically Hallstatt C (Pare 1992, 136–8; 1999, 287–91; Friedrich and Hennig 1996, 284–7; Hennig 2001, 88–9).

Wehringen implies that Gündlingen swords pre-date Mindelheim swords, and that there exists an additional, earliest phase of Hallstatt C preceding Hallstatt C1 as defined by Kossack (Roymans 1991, 36; Needham *et al.* 1997, 98). It would be rash to assume that the implications of this for the Early Iron Age in central Europe have yet been fully absorbed, but Hennig herself has set out the chronology of Bavarian Swabia, the region containing Wehringen, with Hallstatt B3 ending around 800 BC and a new Hallstatt C0 phase occupying the first half of the eighth century (Hennig 2001, 85–6, 88–9, Tabelle 1). This is Hallstatt C1a in Pare's terminology (1999, 186; 286). Hennig (2001) lists other burials characteristic of this phase, including two from Steinkirchen and Weichering, Bavaria, each with a Gündlingen sword and chape (Schauer 1971, nos 631 and 658; Cowen 1967, 429 nos 22–3). Both swords belong to a variant widespread across the Continent and Britain (Cowen 1967, map D; Colquhoun and Burgess 1988, 117–18). Their accompanying chapes belong to Schauer's Neuhaus type (1971, 221, nos 23 and 25), which Pare regards as typologically early (1999, 295–7, Abb. 10). Similar chapes occur in Britain and Ireland (Schauer 1971, Taf. 127B), although Meyer regards these as a separate insular type, named after Coplow Farm (Meyer 1984–5, 71–2, figs 1, 1–4 and 2).

Schauer (1971, no. 663) classifies the Wehringen sword as indeterminate, and does not include the associated chape in his corpus; it resembles most closely the example with swept-back wings from Mettendorf, Bavaria, attributed to the Prülsbirkig type (*ibid.*, 217, no. 2). This is Meyer's Prülsbirkig I type and he acknowledges British finds as imports (Meyer 1984–5, 72, fig. 1, 7–8; 4). Warmenbol calls this the Sion Reach type and regards these,

and the remaining chapes in the Prüllsbirkig type, as Atlantic products especially characteristic of the Low Countries (Warmenbol 1988, 250–2, pls. 2, 2; 3, 5; 1993, 107–8). He draws attention to an example in the extraordinary grave 72 in the cemetery ‘Op het Hangveld’ at Rekem on the River Maas in Belgian Limburg (Van Impe 1980, 22–4, pls. XI, 5–7 and XII; see also Fontijn and Fokkens this volume). Beside three cremations, this grave contained 17 fragments of bronze packed together and representing at least three Gündlingen swords, two chapes, three spearheads and a ring, all bronze, and a small plate of iron. The second chape belongs to the Coplow Farm type, so that Rekem 72 replicates that find from Suffolk. The Rekem burial has produced a radiocarbon date of 2675 \pm 40 BP, consistent with the earliest phase of Hallstatt C according to Lanting and Van der Plicht (2001–2, 135, 174, 225; see also Fontijn and Fokkens this volume).

That Neuhaus and Prüllsbirkig chapes are associated almost exclusively with bronze swords (Gerdsen 1986, 49, n. 457–8; Pare 1999, 294 n. 718, Abb. 110) tends to support an early date, while the chapes found more commonly with iron swords do not occur in Britain (Gerdsen 1986, 49, n. 463–6; Schauer 1971, 222–4, Taf. 127B) and are typologically later (Pare 1999, 297). This diversion shows that material contemporary with Hennig’s (2001) Hallstatt C0 in Bavaria can be identified in the Low Countries and the British Isles. It seems increasingly clear that these Gündlingen swords, winged chapes and trapezoidal razors were developed in western Europe and were not of central European Hallstatt C origin (Pare 1999, 309–12; Gerloff 2004).

Hennig (2001, 53; 89) marks the end of Hallstatt C0 with finds from Kissing and Bubesheim barrow 2. The former (*ibid.*, Taf. 65) contains a bronze Gündlingen sword, three phalerae (Gleirscher 1993, Liste 2, 7: Lengenfeld type) and a winged chape of Büchenbach type, which was also adapted in Britain and Ireland (Meyer 1984–5, 72, fig. 3). Bubesheim has a Gündlingen sword of iron (Hennig 2001, Taf. 118, 6).

Kossack’s (1959) Hallstatt C1 is now the second phase of the Early Iron Age, characterised by iron Mindelheim swords and rich horse-gear (Pare 1992, 139–46; 1999, 287–93), dated to the second half of the eighth century BC by Hennig (2001, 89–91, Tabelle 1).

Barrow 1 from Wehringen-Hexenberg is characteristic and this contains phalerae (*ibid.*, 71, Taf. 105–6) that belong to the Pfatten type as defined by Gleirscher (1993, Liste 1) – that is with an annular loop fastened through the dome with a projecting peg. Phalerae from Mindelheim grave 7, characteristic of Hallstatt C1 (Hennig 2001, 89; Pare 1992, 139; 1999, 303 n. 747), belong to Gleirscher's Lengenfeld type – with a U-shaped loop cast in one with a disc and inserted through a slot in the centre of the dome (Gleirscher 1993, Liste 2, 6). Gleirscher mistakenly attributes the largest phalera from Llyn Fawr to his Lengenfeld type (*ibid.*, Liste 2, 1; Savory 1980, fig. 45, 16) and the two smaller to Pfatten (Gleirscher 1993, Liste 1, 1; Savory 1980, fig. 45, 14–15): it should be the other way around!

Three phalerae from London (Gleirscher 1993, Liste 2, 2a–c) and the new finds from Melksham ([Appendix 1](#), no. 13) also belong to the Lengenfeld type; this is thus significantly more common in western Europe than the Pfatten variety, which, except for Llyn Fawr, is confined to central Europe (Gleirscher 1993, Abb. 17). Two French burials contain Lengenfeld phalerae: Saulces-Champenoises, Ardennes, and Poiseul-la-Ville, Côte d'Or, barrow 2 (*ibid.*, Liste 2, 4–5; Chaume and Feugère 1990, 26–30); this indicates a date in Hallstatt C1 – Pare's Hallstatt C1b (1999, 303) – which should apply to the Burgundian burials with long iron swords (Chaume and Feugère 1990, 59–60, fig. 49) although Pare (1999, 310) is cautious about their chronology.

Some scholars no longer recognise Kossack's (1959) Hallstatt C2 as a separate phase, preferring to regard it as part of Hallstatt D (Pare 1992, 146; Nebelsick 1997, 68, Tabelle 3; Baitinger 1999, 197–201; Lanting and Van der Plicht 2001–2, 123). However, Hennig (2001, 91, Tabelle 1) retains Hallstatt C2 for Bavarian Swabia and Pare (1992, 146–51) distinguishes a later group of wagon graves within Hallstatt C. Returning to phalerae, we can confirm the example from the Sompting hoard ([Appendix 1](#), 23) as an import of this phase from the east Alpine area (Gleirscher 1993, 48–51, 54, Liste 3, 1, Abb. 17; Meyer 1984–5, fig. 4, 15), dated to the later seventh century BC in Slovenia (Dular 2003, 117–18, Abb. 51; 65, 3–7).

Ewart Park / LBA3	Llyn Fawr / LBA4				Early Iron Age	
	Gündlingen swords, chapes Ferring hoard		Llyn Fawr hoard	Samplings hoard		
Hallstatt B3	C0	C1		C2	D1	
	800 BC	750 BC	700 BC	650 BC	600 BC	

Fig. 7. Chronological table.

The Ohnenheim wagon grave, Alsace, is characteristic of Hallstatt C2 (Pare 1992, 151–2; Hennig 2001, Tabelle 1) and its recent publication contains a distribution map of *Jochschnallen* (yoke mounts), including Llyn Fawr (Egg 1987, 92, Abb. 16). *Jochschnallen* appeared during Hallstatt C1 when they were part of Kossack's rich horse-gear (Pare 1992, 139–40, figs 100, 13–15 and 101d). The Llyn Fawr piece is probably of central European inspiration rather than origin (O'Connor 1980, 255; Meyer 1984–85, 75).

Usually presumed to be a Hallstatt import is the antennae-pommel iron sword from the Thames (O'Connor 1980, 248; Sievers 1982, Taf. 38, 2; Stead 1984, fig. 17, 1, pl. I, b; Jope 2000, 12, 229, pl. 13e), although Stead (1984, 44) finds no exact parallel on the Continent. These weapons normally belong to Hallstatt C2 or Hallstatt D, so the date earlier in Hallstatt C for the example from Court-Saint-Etienne barrow 3, by reference to its associated horse-gear, as proposed by Sievers (1982, 18 n.4), is not necessarily convincing. Roymans dates this barrow to Hallstatt C and proposes an Atlantic rather than central European origin for Court-Saint-Etienne and other short iron swords from the Low Countries; indeed he goes on to suggest that these iron swords might have been contemporary with Gündlingen weapons (Roymans 1991, 36–7; table 5).

However, dates within Hallstatt D are also current for the Court-Saint-Etienne burial (Warmenbol 1993, 104–5; Lanting and Van der Plicht 2001–2, 173), which is doubly relevant for Late Bronze Age 4 since it contains a bronze linear-faceted axe (O'Connor 1980, 233). Stead too implies a late date for the Thames sword by relating its hilt construction to that of a local Hallstatt D dagger (1984, 44–6).

There are tree-ring dates in the second quarter of the seventh century BC for Hallstatt C2 pottery in Bavarian Swabia (Hennig 2001, 86, 91). Hallstatt D had begun by the final quarter of the seventh century BC, as indicated by revised tree-ring dates from 616 BC onwards for the great Magdalenenberg barrow in the Black Forest (Billamboz and Neyses 1999; Friedrich and Hennig 1996, 284, fig. 5). Around this time, the use of bronze in Britain ceased except for ornaments (Northover 1984, 130).

Thus we can see that the Llyn Fawr phase began around 800 BC (Fig. 7), earlier or later depending on the British or continental origin of Gündlingen swords. It is regrettable that the Boyton hoard does not survive complete, since if it was a Late Bronze Age 3 hoard – as the south-eastern axe would suggest – containing a fragment of a Gündlingen sword, that would be a strong argument in favour of a British origin (perhaps reinforced by the North Tuddenham hoard). The Ferring hoard combines Gündlingen swords with the axes characteristic of other Late Bronze Age 4 hoards. Llyn Fawr itself can be linked to Hallstatt C1 and so dated around 700 BC, while the Sompting hoard is related to Hallstatt C2 and dated to the mid-seventh century BC (or later still if Hallstatt C2 material is really to be dated contemporary with Hallstatt D1). This is consistent with the latest views of the chronology of the Llyn Fawr phase (Rohl and Needham 1998, 10, fig. 21 800–650 BC; Lanting and Van der Plicht 2001–2, 143: 800–600 BC).

Iron and gold

While iron objects are scarce in Llyn Fawr hoards, the absence of bronze objects may be significant for the introduction of iron. Bronze spearheads were not deposited during Late Bronze Age 4, but iron spear-heads occur at Llyn Fawr and Melksham: could this indicate an early transition to iron? Bronze was clearly used for swords during the early part of Late Bronze Age 4, but similar swords disappeared from central Europe around 750 BC and probably at around the same time in the Low Countries (Roymans 1991, 37, table 5), so perhaps iron swords also replaced bronze then in Britain. Although Northover (1984, 140–1) doubted the routine production of iron objects in Britain during Late Bronze Age 4, Rohl and Needham suggest that iron was gradually adopted for tools and

weapons (1998, 109; Needham this volume). Bronze axes continued throughout the period, supported by the radiocarbon date on a Sompting axe (Needham *et al.* 1997, 98, table 1, illus. 6 and 23, 1). We have noted woodworking evidence for the use of iron axes during Late Bronze Age 4. An iron socketed axe has been dated to 2480 ± 50 BP, covering the span of Late Bronze Age 4, but also two centuries later (*ibid.*, 99); earlier dates have been obtained for two iron axes from the Netherlands (Lanting and Van der Plicht 2001–2, 173). However, bronze socketed axes may have persisted into Hallstatt D in the Low Countries (Warmenbol 1993, 105).

No Late Bronze Age 4 context contains gold, which disappears after Late Bronze Age 3 (Eogan 1994, 108), although continental finds indicate foil or sheet was still used on penannular rings during Hallstatt C (Dehon 1991, 120), and the Mindelheim sword from Oss in the Netherlands has gold inlay (Fontijn and Fokkens this volume). Northover (1999, 264) suggests ribbon torcs persisted in Scotland, but Eogan (1983) does not see continuity between the Bronze Age and Iron Age forms. The gold bracelets from Nowton, Suffolk (J. Taylor 1980, 85, Sf 5–6), attributed to Late Bronze Age 4 by Robin Taylor (1993, EA108) may be much earlier (Longworth 1972).

Conclusion

The Llyn Fawr phase thus lasted nearly two hundred years (Fig. 7), and cannot have been a mere hiatus between the Late Bronze Age and the Iron Age. It was clearly the final metalworking stage in the 1500-year-long sequence of the British Bronze Age. Bronze objects continued to be made. Indeed some types traditionally regarded as imports were probably produced in Britain: examination of razors suggests these were produced independently of central Europe, while chapes and perhaps even phalerae were adapted in Britain from Hallstatt C types.

Some changes in deposition did take place, perhaps because of reduced supplies of continental metal. In south-eastern England, relations shifted to the Low Countries, while Wessex and the South-West renewed their earlier links with Normandy and Brittany. This may reflect changes in sources of metal, as suggested by Northover (1984, 129–30). The evidence certainly does not suggest that the

bottom fell out of the British bronze market under Hallstatt C influence; indeed the value and quality of metalwork probably increased compared with Late Bronze Age 3 (*ibid.*, 128–9). As one of the other participants in the Durham Seminar suggested, people may have preferred to continue to use bronze during the Llyn Fawr phase for reasons quite unconnected with technology (Bradley 1998, xxix–xxx, 150–4; Needham this volume).

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Note

1. The use of the term Late Bronze Age 4 follows O'Connor (1980, chapter 7).

Appendix 1. Llyn Fawr hoards in Britain

1. Carn Brea (Cornwall)

Pearce 1983, 424 no. 129, pls. 16–17; Northover 1988, fig. 42. Sompting, Armorican and other axes.

2. Gwinear (Cornwall)

Pearce 1983, 408 no. 60, pl. 5; Huth 1997, 273 no. 2. Large hoard, 40 + ? Armorican axes.

3. Kings Weston Down, Henbury (Avon)

Northover 1988, fig. 42. Sompting, Armorican and other axes; Locock 2001, 126, fig. 11.5 appears also to show the blade of a linear-faceted axe. Fragments and casting jet indicate that this was a scrap hoard.

4. Cardiff (Glamorgan)

Savory 1980, 123 no. 290, fig. 45; Northover 1988, fig. 42; Thomas 1989, Appendix 1; Martin 2003, 18–19.

5. Llyn Fawr (Glamorgan)

Savory 1980, 123–5 nos 291–4, figs 45–6; Northover 1988, fig. 42; Thomas 1989, Appendix 1; Martin 2003, 13–17. Two additional Sompting axes have been published by Green (1985).

6. Tintern (Monmouthshire)

Savory 1980, 123 no. 289, fig. 44; Thomas 1989, Appendix 1. Two Armorican axes.

7. Blandford (Dorset)

Pearce 1983, 465 no. 348, pls 45–6; Thomas 1989, Appendix 1; Northover 1988, fig. 42; Taylor 1993, W4; Huth 1997, 273 no. 4. Linear-faceted axes.

8. Eggardon (Dorset)

Pearce 1983, 462 no. 336, pls 45 and 151; Thomas 1989, Appendix 1; Taylor 1993, W1; Huth 1997, 273 no. 3. Linear-faceted axes.

9. Portland (Dorset)

Pearce 1983, 479 no. 433, pl. 55; Thomas 1989, Appendix 1; Taylor 1993, W13; Huth 1997, 274 no. 5. Linear-faceted axes.

10. Thorney Down, Sixpenny Handley (Dorset)

Pearce 1983, 474 no. 407, pl. 52; Thomas 1989, Appendix 1; Taylor 1993, W15; Huth 1997, 274 no. 6. Linear-faceted axes.

An additional axe from this hoard is published here for the first time (Fig. 4). It was discovered 'in a box in the outside privy to No. 2 Down Farm Cottages' (Martin Green, *in litt.*) and is in a private collection. The axe is complete except for its blade tips; original surface preserved with green patina and patches of corrosion. Irregular round mouth with indistinct collar moulding; shallow loop with narrow perforation. Trapezoidal blade, sub-rectangular section, thin walls. Two diverging ribs on each face, slight traces of ribs on angles. Casting seams preserved; edge eroded, but no sign of sharpening or working. Length 97 mm; mouth diameter c. 30 mm; max. width 48 mm. This axe resembles so closely two of those in the Thorney Down hoard (Dorset County Museum 1933 14.2 and 1952 36.1) that it must have come from the same model or mould. This resemblance and the discovery of the axe just a few hundred metres from Thorney Down indicate that we may add it to the hoard, which thus contains eight axes and five socketed gouges (Dorset County Museum 1933 14.1–4, 1952 36.1–8).

11. Near Weymouth (Dorset)

Pearce 1983, 487 no. 478, pl. 60; Taylor 1993, W20; Huth 1997, 274 no. 7. Linear-faceted axes.

12. Figheldean (Wiltshire)

Thomas 1989, Appendix 1; Taylor 1993, W70; Huth 1997, 275 no. 23. Sompting axes.

13. Melksham (Wiltshire)

Thomas 1989, Appendix 1; Taylor 1993, W72; Huth 1997, 275 no. 24. Three phalerae assumed to be from the same context (Osgood 1995).

14. Netherhampton (Wiltshire)

Stead (1998) includes the material attributed to 'Gloucester-shire' by MacGregor 1987, 17–18, Group 1, pl. 9 and Huth 1997, 274 no. 9.

15. Danebury (Hampshire)

Northover 1988, fig. 42; Thomas 1989, Appendix 1; Taylor 1993, W32; Huth 1997, 274 no. 12; Cunliffe 1984, 335–40; Cunliffe and Poole 1991, 328. Additional material to the original publication includes two tanged

chisels with triangular blades of Llyn Fawr form and composition (Cunliffe 1984, nos 1.17–18, fig. 7.4).

16. Nether Wallop (Hampshire)

Thomas 1989, Appendix 1; Taylor 1993, W31; Huth 1997, 274 no. 11, 'A heap of ' Armorican axes; a dozen survive.

17. New Forest (Hampshire)

Thomas 1989, Appendix 1; Taylor 1993, W33; Huth 1997, 274 no. 13, large hoard of Armorican axes, now lost. Lort 1779, pl. VIII, 9–10, shows two Armorican axes, ones 5 inches long with single rib and pellet, other 3 inches long and plain, p. 114 'found with a great many more in the New Forest'.

18. Fawley area (Hampshire)

DCMS 2002, 74, fig. 48; <http://www.findsdatabase.org.uk> HAMP1450, etc. Large hoard of 68 Armorican axes. Hampshire County Museums Service.

19. Ventnor (Isle of Wight)

Thomas 1989, Appendix 1; Taylor 1993, W57; Huth 1997, 274 no. 14; Northover 2001, 436–8, 445–6. Thirty Armorican axes.

20. Tower Hill, Ashbury (Oxfordshire, was Berks.) Coombs *et al.* (2003). Large hoard containing Sompting axes, axe fragments, also various ornaments.

21. Eastbourne (Sussex)

Huth 1997, 274 no. 8. Two axes, Budgen 1920, pl. on p. 143: left, Sompting with complex triple rib and pellet decoration; right, smaller, undecorated blade, double horizontal rib below collar. The former may be the example with complex patterns marked on Burgess' map (1967–70, fig. 2) as a single find. The latter perhaps belongs to the Beddlestead Green variant of south-eastern type (Schmidt and Burgess 1981, 213); however, smaller axes with undecorated blades occur in the Sompting hoard (Curwen 1948, 162–3, nos 9–11 and 17).

22. Ferring (Sussex)

Huth 1997, 275 no. 21, Taf. 36–7. Includes Sompting and linear-faceted axes, a socketed chisel and fragments of Gündlingen sword blades.

23. Sompting (Sussex)

Thomas 1989, Appendix 1; Huth 1997, 275 no. 22.

24. Kingston (Surrey)

Needham 1987, 123 n. 30, fig. 5.17; Thomas 1989, Appendix 1; Huth 1997, 274 no. 10. Four Sompting axes.

25. Wicken Fen (Cambridgeshire)

Thomas 1989, Appendix 1; Taylor 1993, EA37; Huth 1997, 273 no. 1. Two linear-faceted axes, typologically early.

26. East Rudham (Norfolk)

DCMS 2002, 75, fig. 30. Twenty-three linear-faceted axes, very similar to Watton hoard; Norfolk Museums Service.

27. Watton (Norfolk)

Thomas 1989, Appendix 1; Taylor 1993, EA94; Huth 1997, 275 no. 18; Pendleton 1999, 205 no. 8777. Linear-faceted axes.

28. Skelmore Heads, Urswick (Cumbria, was Lancs.) Brown 1996, 4; Barber 2003, 60, illus. 14. Includes three Sompting axes (Schmidt and Burgess 1981 nos 1580, 1598 and 1613, p. 244, 246).

29. Lamancha, Newlands (Peeblesshire)

Coles 1959–60, 124; Schmidt and Burgess 1981, nos 1648– 50. Three Armorican axes.

30. Poolewe, Gairloch (Wester Ross; [Fig. 3](#))

Coles 1959–60, 129. Includes two Sompting axes (Schmidt and Burgess 1981 nos 1581–2, pl. 152C; [Fig. 3](#), 2–3) and one Roseberry Topping axe (*ibid.*, no. 1628, p. 244, 246; [Fig. 3](#), 1). T-section ring, 3¼ inches (83 mm) diam. ([Fig. 3](#), 7) interpreted as cauldron handle of Class B2 (Leeds 1930, 19; 34, no. 34 – who refers to ‘ring and staple’), although relatively small in size. The Sompting cauldron has handles 3.3 inches (84 mm) diam. and complex section of different form (Curwen 1948, 160, fig. 2). Ring fragments from Broom of similar size (no. 11, c. 78 mm) and of complex section (Watson 1999, 46, nos 8–11, fig. 19). Similar section on handles of cauldron from ‘Ballymoney’, though these appear to be larger (Briggs 1987, 182–3, fig. 7). Two unclassified socketed axes (Schmidt and Burgess 1981, nos 1693–4; [Fig. 3](#), 4 and 5); hollow annular ring ([Fig. 3](#), 6); penannular ornament with trumpet-shaped terminals ([Fig. 3](#), 8). Another ‘ring similar to these’, i.e. to the cauldron handle and hollow ring, was retained by the finder (*Proceedings of the Society of Antiquaries of Scotland* 14, 1880, 46) and is presumed lost.

The following hoards listed as Llyn Fawr by Thomas (1989) contain

mainly Ewart Park/Carp's Tongue material: Lulworth, Dorset; Bexley Heath, Kent; Hoe, Norfolk (Pendleton 1999, 203 no. 2790) and Manton Preshute, Wiltshire.

Huth (1997, 273–5) includes four other finds excluded from this list. Billingham, Lincolnshire (no. 16): two Gündlingen swords (Colquhoun and Burgess 1988, 118, nos 720–1, pl. 105) – a third, unprovenanced example (no. 725) appears to be from the same mould – (Gerdson 1986, 190 no. 11); this find is included on [Figure 5](#). Hockwold, Norfolk (no. 17): two axes – one apparently Sompting (Taylor 1993, EA57) – found in the same field but not necessarily associated (Pendleton 1999, 178, 232 no. 5371). Garsington, Oxfordshire (no. 19): a linear-faceted axe 'found in association with' a double-looped palstave (Leeds 1939, 248, figs 7–8), a find that deserves further study. Boyton, Suffolk (no. 20; Burgess 1979, 269, fig. 15B; Colquhoun and Burgess 1988, 119 no. 734; Taylor 1993, EA103; Pendleton 1999, 208 no. 02636), small fragment of Gündlingen sword blade inside a southeastern socketed axe, probably part of a larger hoard. Without knowing the original composition of this hoard, it does not seem justifiable to include Boyton as Late Bronze Age 4 rather than transitional from Late Bronze Age 3.

The find from Paston, Norfolk (Taylor 1993, EA75; Pendleton 1999, 204 no. 6877) with a typologically early linear-faceted axe (O'Connor 1980, 421, no. 220, fig. 72C) and Middle Bronze Age palstaves is probably not a real association.

Appendix 2. Recent finds of Llyn Fawr razors

1. Netherhampton hoard (Wiltshire)

Three trapezoidal, two annular (Stead 1998, fig. 7, pl. 16). The former belong to the Feldkirch/Bernissart type, one annular is Wiesloch and the other Gramat.

2. Slade Farm, Bicester (Oxfordshire)

Small example, trapezoidal blade, openwork and loops (*Oxoniensia* 65, 2000, 249–50, fig. 21, 1). Perhaps derived from the Feldkirch type.

3. Brailes (Warwickshire)

Said to be very similar to the razor from Llyn Fawr (Jockenhövel 1980 no. 719).

http://www.findsdatabase.org.uk/hms/pas_obj.php?type=finds&id=51312

4. Ellesborough (Buckinghamshire)

Double-edged (Farley 1984). Not diagnostic, but related to the Wiesloch type.

5. St Albans (Hertfordshire)

Trapezoidal (Saunders 1980–2). Probably closest to the Unterstall type.

6. Soham (Cambridgeshire)

Trapezoidal (Taylor 1985, 6 no. 1, fig. 1). Very similar in form to the eponymous example from Flörsheim, Hesse (Jockenhövel 1971, 239 no. 574).

7. Stonea Grange, Wimblington (Cambridgeshire)

One side of a single-edged razor with ring handle, probably one of a pair (Needham 1996, 257 no. 1, fig. 87, 1; Pendleton 1999, 201 no. 6057A).

8. Welney area (Norfolk) http://www.findsdatabase.org.uk/hms/pas_obj.php?type=finds&id=338393

9. Martlesham (Suffolk)

Slightly crescentic single-edged blade, one loop (Pendleton 1999, 197, 216 no. 01519; Martin *et al.* 1986, 142, fig. 28). In form, it resembles the razor from Hills Road, Cambridge, attributed to the Feldkirch type by Jockenhövel (1980, 202 no. 666A), though neither is particularly characteristic.

10. Wickham Skeith (Suffolk)

Fragment of trapezoidal or crescentic blade with square perforations and remains of one loop (Martin *et al.* 2002, 212, fig. 45, c).

11. Les Huguettes, Alderney (Channel Islands)

Havré type (Johnston 1981, 38, 133, fig. 17f; Wilson 1983, 402, pl. 0).

Bibliography

- Baitinger, H. 1999. *Die Hallstattzeit im Nordosten Baden-Württembergs*. Stuttgart: Materialhefte zur Archäologie in Baden-Württemberg 46.
- Barber, M. 2003. *Bronze and the Bronze Age*. Stroud: Tempus Publishing.
- Bell, J.A. and Watson, M.D. 1993. Two prehistoric bronze weapons from Shropshire, *Shropshire History and Archaeology* 68, 103–106.
- Billamboz, A. and Neyses, M. 1999. Das Fürstengrab von Villingen-Magdalenenberg im Jahrringkalender der Hallstattzeit, in K Spindler, *Der Magdalenenberg bei Villingen* (2nd edn), 91–109. Stuttgart: Führer zur archäologischen Denkmälern in Baden-Württemberg 5.
- Blanchet, J.-C. 1984. *Les premiers métallurgistes en Picardie et dans le Nord de la France*. Paris: Mémoires de la Société Préhistorique Française 17.
- Blanchet, J.-C. 1993. Ile-de-France, *Gallia Informations* 1993, 1–175.
- Borgna, E. 1999. The north Adriatic regions between Europe and the Aegean world (12th–8th CA): social strategies and symbols of power in the long-distance exchange, in *Eliten in der Bronzezeit*, 151–83. Mainz: Monographien des Römisch-Germanischen Zentralmuseums 43.
- Bradley, R. 1998. *The Passage of Arms: an Archaeological Analysis of Prehistoric Hoards and Votive Deposits* (2nd edn). Oxford: Oxbow Books.
- Briggs, C.S. 1987. Buckets and cauldrons in the Late Bronze Age of north-west Europe: a review, in J. Blanchet (ed.), *Les relations entre le Continent et les Iles Britanniques à l'Age du Bronze*, 161–187. Amiens: Revue Archéologique de Picardie Numéro Spécial.
- Brown, M. 1996. *Skelmore Heads, Urswick, Cumbria*. Cambridge: RCHME Archaeological Investigation Report Series 8.
- Budgen, W. 1920. Bronze celts found at Eastbourne, *Sussex Archaeological Collections* 61, 143–144.
- Burgess, C.B. 1967–70. Some decorated socketed axes in Canon Greenwell's collection, *Yorkshire Archaeological Journal* 42, 267–272.
- Burgess, C.B. 1979. A find from Boyton, Suffolk, and the end of the Bronze Age in Britain and Ireland, in Burgess and Coombs 1979, 269–283.
- Burgess, C. and Coombs, D. (eds) 1979. *Bronze Age Hoards*. Oxford: British Archaeological Reports British Series 67.
- Chaume, B. and Feugère, M. 1990. *Les sépultures tumulaires aristocratiques du*

- Hallstatt ancien de Poiseul-la-Ville (Côte-d'Or)*. Dijon: Revue Archéologique de l'Est et du Centre-Est, Xe Supplément.
- Chitty, L.F. 1940. Bronze implements and other objects from Shropshire in the National Museum of Wales, Cardiff, *Transactions of the Shropshire Archaeological Society* 50/2, 143–154.
- CMAL 2003. *Portable Antiquities Scheme Annual Report 2001/02–2002/ 03*. London: Council for Museums, Archives and Libraries.
- Coles, J.M. 1959–60. Scottish Late Bronze Age metalwork: typology, distribution and chronology, *Proceedings of the Society of Antiquaries of Scotland* 93, 16–134.
- Colquhoun, I. and Burgess, C. 1988. *The Swords of Britain*. Munich: Prähistorische Bronzefunde IV/3.
- Coombs, D. 1979. The Figheldean Down hoard, Wiltshire, in Burgess and Coombs 1979, 253–268.
- Coombs, D. 2001. Metalwork, in Pryor 2001, 255–298.
- Coombs, D., Northover, P. and Maskall, J. 2003. Tower Hill axe hoard, in D. Miles, S. Palmer, G. Lock, C. Gosden and A. Cromarty, *Uffington White Horse and its Landscape: Investigations at White Horse Hill, Uffington, 1989–95 and Tower Hill, Ashbury, 1993–4*, 203–223. Oxford: Thames Valley Landscapes Monograph 18.
- Cowen, J.D. 1967. The Hallstatt sword of bronze: on the Continent and in Britain, *Proceedings of the Prehistoric Society* 33, 377–454.
- Cuddeford, M.J. and Sealey, P.R. 2000. A late Bronze Age hoard from High Easter, *Essex Archaeology and History* 31, 1–17.
- Cunliffe, B. 1984. *Danebury: an Iron Age Hillfort in Hampshire, Vol. 2*. London: Council for British Archaeology Research Report 52.
- Cunliffe, B. 2005. *Iron Age Communities in Britain* (4th edn). London: Routledge.
- Cunliffe, B. and Poole, C. 1991. *Danebury: an Iron Age Hillfort in Hampshire, Vol. 5*. London: Council for British Archaeology Research Report 73.
- Curwen, E.C. 1948. A bronze cauldron from Sompting, Sussex, *Antiquaries Journal* 28, 157–163.
- DCMS 2002. *Portable Antiquities Annual Report 2000–2001*. London: Department for Culture, Media and Sport.
- Dehon, D. 1991. Han-sur-Lesse (Namur – Belgique) et le Bronze Final atlantique, in C. Chevillot and A. Coffyn (eds), *L'Age du Bronze atlantique*, 111–124. Beynac-et-Cazenac: L'Association des Musées du Sarladais.
- Dular, J. 2003. *Die hallstattzeitlichen Nekropolen in Dolenjsko*. Ljubljana: Opera Instituti Archaeologici Sloveniae 6.
- Egg, M. 1987. Das Wagengrab von Ohnenheim im Elsass, in *Vierrädige*

- Wagen der Hallstattzeit, 77–102. Mainz: Monographien des Römisch-Germanischen Zentralmuseums 12.
- Eogan, G. 1983. Ribbon torcs in Britain and Ireland, in A. O'Connor and D.V. Clarke (eds), *From the Stone Age to the 'Forty-five: Studies presented to R.B.K. Stevenson*, 87–126. Edinburgh: John Donald.
- Eogan, G. 1994. *The Accomplished Art*. Oxford: Oxbow Monograph 42.
- Farley, M. 1984. A late Bronze Age razor from Ellesborough, Buckinghamshire, *Antiquaries Journal* 64, 361–362.
- Friedrich, M. and Hennig, H. 1996. A dendrodate for the Wehringen Iron Age wagon grave (778 \pm 5 BC) in relation to other recently obtained absolute dates for the Hallstatt period in southern Germany, *Journal of European Archaeology* 4, 281–303.
- Gardner, W. and Savory, H.N. 1964. *Dinorben*. Cardiff: National Museum of Wales.
- Gerdson, H. 1986. *Studien zu den Schwertgräbern der älteren Hallstattzeit*. Mainz: Philipp von Zabern.
- Gerloff, S. 2004. Hallstatt fascination: 'Hallstatt' buckets, swords and chapes from Britain and Ireland, in J. Bradley, J. Coles, E. Grogan, B. Raftery and H. Roche (eds), *From Megaliths to Metal. Essays in Honour of George Eogan*, 124–154. Oxford: Oxbow Books.
- Gingell, C.J., Lawson, A.J. and Mortimer, C. 2000. Copper alloy objects, in A.J. Lawson, *Potterne 1982–5: Animal Husbandry in Later Prehistoric Wiltshire*, 186–198. Salisbury: Wessex Archaeology Report 17.
- Giraud, J.-P., Pons, F. and Janin, T. 2003. *Nécropoles protohistoriques de la région de Castres (Tarn)*. Paris: Documents d'Archéologie Française 94.
- Gleirscher, P. 1993. Der bronzene „Schildbuckel“ von der Gurina (Karnten), *Germania* 71, 31–57.
- Green, H.S. 1985. The Llyn Fawr hoard: two new finds, *Bulletin of the Board of Celtic Studies* 32, 288–289.
- Hearne, C.M., Perkins, D.R.J. and Andrews, P. 1995. The Sandwich Bay Wastewater Treatment Scheme archaeological project, 1992– 1994, *Archaeologia Cantiana* 115, 239–354.
- Hennig, H. 2001. *Gräber der Hallstattzeit in Bayerisch-Schwaben*. Stuttgart: Monographien der Archäologischen Staatsammlung München 2.
- Huth, C. 1997. *Westeuropäische Horte der Spätbronzezeit: Fundbild und Funktion*. Regensburg: Regensburger Beiträge zur Prähistorischen Archäologie 3.
- Huth, C. 2000. Metal circulation, communication and traditions of craftsmanship in Late Bronze Age and Early Iron Age Europe, in C.F.E. Pare (ed.), *Metals Make the World go Round*, 176–193. Oxford: Oxbow Books.

- Jockenhövel, A. 1971. *Die Rasiermesser in Mitteleuropa*. Munich: Prähistorische Bronzefunde VIII/1.
- Jockenhövel, A. 1980. *Die Rasiermesser in Westeuropa*. Munich: Prähistorische Bronzefunde VIII/3.
- Johnston, D.E. 1981. *The Channel Islands: an Archaeological Guide*. Chichester: Phillimore.
- Joep, E.M. 2000. *Early Celtic Art in the British Isles*. Oxford: Clarendon Press.
- Kossack, G. 1959. *Südbayern während der Hallstattzeit*. Berlin: Römisch-Germanischen Forschungen 20.
- Lanting, J.N. and Van der Plicht, J. 2001–2. De 14C-chronologie van de Nederlandse pre- en protohistorie, IV: Bronstijd en Vroege IJzertijd, *Palaeohistoria* 43–44, 117–262.
- Lawson, A.J. 1983. *The Archaeology of Witton, near North Walsham*. Gressenhall: East Anglian Archaeology Report 18.
- Leeds, E.T. 1930. A bronze cauldron from the River Cherwell, Oxfordshire, *Archaeologia* 80, 1–36.
- Leeds, E.T. 1939. Bronze Age, in L.F. Salzman (ed.), *The Victoria History of the County of Oxford* 1, 241–251. London: Constable.
- Locock, M. 2001. A Later Bronze Age landscape on the Avon Levels, in, J. Brück (ed.), *Bronze Age Landscapes: Tradition and Transformation*, 120–128. Oxford: Oxbow Books.
- Longworth, I.H. 1972. Two gold bracelets from Nowton, Bury St. Edmunds, *Proceedings of the Suffolk Institute of Archaeology* 32, 271–272.
- Lort, Rev. M. 1779. Observations on celts, *Archaeologia* 5, 106–118.
- MacGregor, A. 1987. *Antiquities from Europe and the Near East in the Collection of the Lord McAlpine of West Green*. Oxford: Ashmolean Museum.
- Manby, T.G. 1980. Bronze Age settlement in Eastern Yorkshire, in J. Barrett and R. Bradley (eds), *Settlement and Society in the British Later Bronze Age*, 307–370. Oxford: British Archaeological Reports British Series 83.
- Martin, C. 2003. *Iron Age Artefacts in Wales*. Oxford: British Archaeological Reports British Series 353.
- Martin, E., Plouviez, J. and Feldman, H. 1986. Archaeology in Suffolk 1985, *Proceedings of the Suffolk Institute of Archaeology and History* 36, 139–156.
- Martin, E., Pendleton, C., Plouviez, J. and Geake, H. 2002. Archaeology in Suffolk 2001, *Proceedings of the Suffolk Institute of Archaeology and History* 40, 201–233.
- Merhart, G. von 1969. Studien über einige Gattungen von Bronzegefäßen, in G. von Merhart, *Hallstatt und Italien*, 280–379. Mainz: Römisch-Germanischen Zentralmuseum.

- Meyer, M. 1984–5. Hallstatt imports in Britain, *Bulletin of the Institute of Archaeology University of London* 21–2, 69–84.
- Müller, F., Kaenel, G. and Lüscher, G. (eds) 1999. *Die Schweiz vom Paläolithikum bis zum frühen Mittelalter, 4: Eisenzeit*. Basel: Schweizerische Gesellschaft für Ur- und Frühgeschichte.
- Nebelsick, L.D. 1997. Der Kalenderberggruppe der Hallstattzeit am Nordostalpenrand, in J.W. Neugebauer (ed.), *Hallstattkultur im östlichen Österreichs*, 9–145. St. Pölten: Wissenschaftliche Schriftenreihe Niederösterreich 106–109.
- Needham, S. 1987. The Bronze Age, in J. Bird and D.G. Bird (eds), *The Archaeology of Surrey to 1540*, 97–137. Guildford: Surrey Archaeological Society.
- Needham, S. 1996. The Bronze Age metalwork and metallurgical debris, in R.P.J. Jackson and T.W. Potter, *Excavations at Stonea, Cambridgeshire, 1980–85*, 257–260. London: British Museum Press.
- Needham, S., Ramsey, C.B., Coombs, D., Cartwright, C. and Pettitt, P. 1997. An independent chronology for British Bronze Age metalwork: the results of the Oxford Radiocarbon Accelerator programme, *Archaeological Journal* 154, 55–107.
- Northover, P. 1984. Iron Age bronze metallurgy in central southern England, in B. Cunliffe and D. Miles (eds), *Aspects of the Iron Age in Central Southern Britain*, 126–145. Oxford: Oxford University Committee for Archaeology Monograph 2.
- Northover, P. 1988. The late Bronze Age metalwork: general discussion, in B. Cunliffe, *Mount Batten, Plymouth*, 75–85. Oxford: Oxford University Committee for Archaeology Monograph 26.
- Northover, P. 1999. Bronze Age gold in Britain, in B. Cauuet (ed.), *L'or dans l'antiquité*, 251–266. Toulouse: Aquitania Supplément 9.
- Northover, P. 2001. Bronze Age metalwork of the Isle of Wight, in W.H. Metz, B.L. van Beek and H. Steegstra (eds), *PATINA: Essays presented to Jay Jordan Butler on the Occasion of his 80th birthday*, 430–448. Groningen: privately published.
- O'Connor, B. 1980. *Cross-Channel Relations in the Later Bronze Age*. Oxford: British Archaeological Reports International Series 91.
- Osgood, R. 1995. Three bronze phalerae from the River Avon, near Melksham, *Wiltshire Archaeological and Natural History Magazine* 88, 50–59.
- Palmer, S.C. 1999. Archaeological excavations in the Arrow Valley, Warwickshire, *Birmingham and Warwickshire Archaeological Society Transactions* 103, 1–230.
- Pare, C.F.E. 1992. *Wagons and Wagon-graves of the Early Iron Age in Central Europe*. Oxford: Oxford University Committee for Archaeology

Monograph 35.

- Pare, C.F.E. 1999. Beiträge zum Übergang von der Bronze zur Eisenzeit in Mitteleuropa. Teil II: Grundzüge der Chronologie in westlichen Mitteleuropa (11.–8. Jahrhundert v. Chr.), *Jahrbuch des Römisch-Germanischen Zentralmuseums Mainz* 46, 175–315.
- Pearce, S.M. 1983. *The Bronze Age Metalwork of South Western Britain*. Oxford: British Archaeological Reports British Series 120.
- Pendleton, C.F. 1999. *Bronze Age Metalwork in Northern East Anglia*. Oxford: British Archaeological Reports British Series 279. Pendleton, C.F. forthcoming. Three recently discovered Late Bronze Age hoards from Suffolk.
- Perkins, D.R.J. 1997. Researches and discoveries: a report on work by the Trust for Thanet Archaeology, *Archaeologia Cantiana* 117, 227–237.
- Perkins, D.R.J., Macpherson-Grant, N. and Healey, E. 1994. Monkton Court Farm evaluation, 1992, *Archaeologia Cantiana* 114, 237–316.
- Prüssing, G. 1991. *Die Bronzegefäße in Österreich*. Stuttgart: Prähistorische Bronzefunde II/5.
- Pryor, F. 2001. *The Flag Fen Basin: Archaeology and Environment of a Fenland Landscape*. London: English Heritage Archaeological Reports.
- Rohl, B. and Needham, S.P. 1998. *The Circulation of Metal in the British Bronze Age: the Application of Lead Isotope Analysis*. London: British Museum Occasional Paper 102.
- Rohl, B.M. and Northover, J.P. 2001. Analysis of the metalwork, in Pryor 2001, 298–308.
- Roymans, N. 1991. Late Urnfield societies in the northwest European plain and the expanding networks of central European Hallstatt groups, in N. Roymans and F. Theuvs (eds), *Images of the Past*, 9–89. Amsterdam: Studies in Pre- and Protohistory 7.
- Sands, R. 1997. *Prehistoric Woodworking*. London: Institute of Archaeology, University College.
- Saunders, C. 1980–2. A Hallstatt C razor from St. Albans, Hertfordshire, *Hertfordshire Archaeology* 8, 201–202.
- Savory, H.N. 1980. *Guide Catalogue of the Bronze Age Collections*. Cardiff: National Museum of Wales.
- Schauer, P. 1971. *Die Schwerter in Süddeutschland, Österreich und der Schweiz I*. Munich: Prähistorische Bronzefunde IV/2.
- Schmidt, P.K. and Burgess, C.B. 1981. *The Axes of Scotland and Northern England*. Munich: Prähistorische Bronzefunde IX/7.
- Sievers, S. 1982. *Die Mitteleuropäischen Hallstattdolche*. Munich: Prähistorische Bronzefunde VI/6.
- Smith, G.H. 1987. A Beaker (?) burial monument and a late Bronze Age

- assemblage from East Northdown, Margate, *Archaeologia Cantiana* 104, 237–289.
- Stead, I.M. 1984. Some notes on imported metalwork in Iron Age Britain, in S. Macready and F.H. Thompson (eds), *Cross-Channel Trade between Gaul and Britain in the Pre-Roman Iron Age*, 43–66. London: Society of Antiquaries of London Occasional Paper 4.
- Stead, I.M. 1998. *The Salisbury Hoard*. Stroud: Tempus.
- Taylor, A. 1985. Prehistoric, Roman, Saxon and Medieval artefacts from the southern Fen Edge, Cambridgeshire, *Proceedings of the Cambridge Antiquarian Society* 74, 1–52.
- Taylor, J.J. 1980. *Bronze Age Goldwork of the British Isles*. Cambridge: Cambridge University Press.
- Taylor, R.J. 1993. *Hoards of the Bronze Age in Southern Britain: Analysis and Interpretation*. Oxford: British Archaeological Reports British Series 228.
- Thomas, R. 1989. The bronze–iron transition in southern England, in M.L.S. Sørensen and R. Thomas (eds), *The Bronze Age–Iron Age Transition in Europe*, 263–286. Oxford: British Archaeological Reports International Series 483.
- Thrane, H. 1978. Fremde Bronzegefäße in südsandinavischen Funden aus der jüngeren Bronzezeit (Periode V), *Acta Archaeologica* 49, 1–35.
- Van Impe, L. 1980. *Graven uit de urnenveldenperiode op het Hangveld te Rekem, I: Inventaris*. Brussels: Archaeologia Belgica 227.
- Warmenbol, E. 1988. Broken bronzes and burned bones; the transition from Bronze to Iron Age in the Low Countries, *Helinium* 28, 244–270.
- Warmenbol, E. 1993. Les nécropoles à tombelles de Gedinne et Louette-Saint-Pierre (Namur) et le groupe «Mosan» des nécropoles à épées halstattiennes, *Archaeologia Mosellana* 2, 83–114.
- Watson, P. 1999. The bronze cauldrons, in Palmer 1999, 43–50.
- Wilson, K. 1983. Excavation of an Iron Age ‘A’ site at Les Huguettes, Alderney, *Société Guernesiaise Reports and Transactions* 21, 393–427.

Intensification of animal husbandry in the Late Bronze Age? The contribution of sheep and pigs

Dale Serjeantson

Introduction

The Middle and Late Bronze Age was a time when settlement and agriculture in southern Britain were changing, with large areas of land, which had formerly been used only for extensive grazing and temporary cultivation, being converted into permanent fields. Agriculture was becoming more intensive, and this intensification can also, I suggest, be seen in the animal husbandry.

The field systems and land boundaries which have been identified, and the carbonised and mineralised cereals recovered from settlement excavations, show that cereal cultivation was carried out in an increasingly intensive fashion from the Middle Bronze Age onwards in lowland areas of Britain. Land boundaries and field systems are found over huge areas of the chalk downland, limestone uplands and gravel terraces of southern Britain by the first millennium BC (McOmish 1998). Today the soils and climate of southern Britain are some of the best in Europe for arable cultivation (Coppock 1976) and they were so in the past, even though until Roman times cultivation was mainly restricted to lighter soils. The permanent fields which begin to be evident are capable of repeated cultivation, but they do require more labour on the part of the farmers, as they need to be manured so that fertility is not lost. When greater quantities of cereals are grown, more grain is available to be stored for consumption in winter, providing a buffer against the risk of starvation.

Clutton-Brock (1989) has pointed out that animals acted as food

storage 'on the hoof' in prehistoric times, but, with increased quantities of grain available, it became less important in the Late Bronze Age for animals to be kept solely as buffers against the risk of possible famine. This in turn opened the way for more specialised management of domestic animals. It would not be surprising therefore if we were to find that animal husbandry in southern Britain became more specialised at this time, and that herds and flocks were managed more intensively.

In this context, intensification is defined as the management of animals with the aim of increasing the quantity of food that they could produce. It is no longer fashionable to apply the theories of agricultural intensification which were developed in the 1960s and 1970s by economists such as Boserup (1965) and Dahl and Hjort (1976) to prehistoric economies. It is now clear that prehistoric communities were motivated by social factors which – at the individual level – were more significant than crude economic calculations, but some of these concepts are nevertheless still relevant to the study of animal husbandry in the past.

Increased intensification of animal husbandry implies that greater labour is required on the part of the herders: for instance they may herd the flock more closely, provide shelter where the flock previously remained outdoors, and milk animals which had previously been kept for meat. The work of the herder who milks their animals increases when calves, lambs and kids are kept away from the cows, sheep or goats for all or part of the day, when animals are milked more often each day, or when milking continues for a longer period. The care and handling of a flock which is milked two or three times a day for five months is very labour-intensive compared with raising a flock for meat and wool, but provided there is labour available for the work, the yield is up to ten times as great as rearing sheep for meat in relation to the quantity of grazing and fodder provided.

Work currently taking place on residues in pottery is now confirming that the milk of both cattle and sheep was used in Britain from an early date (Dudd and Evershed 1998; Copley *et al.* 2003; Mulville and Outram 2005). Legge, in his two studies of animal husbandry at the Middle Bronze Age site of Grimes Graves, has argued the case for 'efficient' cattle husbandry, with a

concentration on milk production (Legge 1981), and by implication an intensification in the management of the cattle. It might be expected that sheep were also milked. But because the milking of sheep is rare today in Britain (Smith 1995) and because the original analysis of the theoretical composition of meat, milk and wool herds was based on work in the Mediterranean (Payne 1973), it has been easy to forget that sheep were milked until the early Middle Ages in Britain (Ryder 1983, 186) and continued to be milked in 'the remoter parts' of Ireland, Wales and Scotland into the nineteenth century (Trow-Smith 1957, 322). An important characteristic of dairy production is that butter and cheese can be stored and therefore traded and exchanged. We are familiar with the notion that more durable goods such as weapons were traded at this time because the physical evidence survives, and I shall suggest here that organic products were also exchanged.

Sites examined

This paper is concerned mainly with Britain, and specifically with southern Britain. I shall compare the management of sheep and the role of pigs at a series of Middle and Late Bronze Age–Early Iron Age sites. These are sites which have been excavated and studied in the past 20 years on a large scale, which have substantial bone assemblages, and where bone survival and/or retrieval was good, since sites with poor survival conditions do not produce samples of a size and quality which can be used in detailed comparisons. The location of the sites and the conditions for bone survival are summarised below. The dates used here are based on the work of Needham (this volume and pers. comm.) and some are slightly modified from the dates given in the original site monographs. A few bones of goat as well as sheep were found at each of the sites discussed. This paper discusses sheep, but the term here should be taken to include both sheep and the few goats present.

Grimes Graves

Two bone assemblages have been examined from Grimes Graves in the East Anglian Breckland (Legge 1981; 1992). Both assemblages are from middens of Middle Bronze Age date in the top of flint mine shafts. They are more or less contemporary, with deposition in Shaft

X possibly lasting longer than in the shaft excavated by the Department of the Environment (DoE). The age at death of the cattle shows that the management of the cattle herds was identical at both locations. The nature of settlement and agriculture in East Anglia at this time is less well known than for the chalk downlands of southern Britain, but Legge points out that the area around Grimes Graves itself would have been particularly fertile agriculturally because the chalk upcast from the flint mines would have worked to enhance the pH of the soil.

Bishop Cannings Down

This small settlement near Devizes was occupied in the Middle Bronze Age. It lies at c. 200–250 m in elevation, surrounded by fields and grazing land in the valleys and on the tops of the downs. Whilst ultimately deriving from occupation debris, the bone remains were mostly found in the topsoil (Maltby 1992). Consequently, the bones are very fragmented, having suffered damage in the ground. For instance, 52% of the cattle remains consist of teeth and jaw fragments. Cattle are the main species found, and a very high percentage of the cattle teeth are from young calves, just as at Grimes Graves. Sheep remains are too few to allow the age at death to be examined.

Dean Bottom

This second Middle Bronze Age settlement was at a similar elevation to Bishop Cannings Down and situated nearby. The bones are again mostly from the abandoned surface of the settlement and from topsoil (Maltby 1992).

Burderop Down

Burderop Down was a large Late Bronze Age open settlement at the same elevation as Bishop Cannings Down and some 13 km distant from it. Again the bones are mostly from topsoil and are very fragmentary: of the cattle remains, 71% were isolated teeth (Maltby 1992).

Brean Down

This Middle and Late Bronze Age settlement in Somerset was

located in a prominent position on the coast where the Somerset Levels drain into the Bristol Channel (Levitan 1990). The site is on limestone. Most of the assemblage appears to be of Late Bronze Age date. The bone is highly fragmented and the sediments were disturbed by rabbit burrowing. Here, too, preservation conditions were quite poor.

Wallingford (Whitecross Farm)

Only a small area has been excavated of what is probably an extensive site at Wallingford, on the floodplain of the Thames at its confluence with the River Thame. In location as well as in date it appears to be closely comparable to Runnymede. Like Runnymede, it is of Late Bronze Age/Earliest Iron Age date (Thomas *et al.* 1989; Cromarty *et al.* 2006). The downland around the settlement would have been excellent for agriculture, even if the soils within the immediate floodplain were too wet and too heavy for cultivation. The contexts from which the small quantity of bones came were as varied as those at Runnymede: some are from occupation spreads and features on dry land, others from a waterlogged midden (Powell and Clark 2006). The excavated bone assemblage is too small to provide an age profile for the sheep, but the ratio of the main species is discussed.

East Chisenbury

What appeared to be a natural mound on elevated ground on the northern flank of Salisbury Plain proved to be a vast midden mound surviving up to 2 m deep. Two small trial trenches have been excavated, representing approximately 0.05% of the volume of the surviving mound (Brown *et al.* 1994; McOmish 1996). The mound is built up from settlement debris, domestic refuse and animal dung, and accumulated during the Earliest Iron Age as defined by Needham (this volume). The animal remains have recently been examined in two student dissertations. This work has shown that survival of bones and teeth (including the many juvenile teeth) is very good and that the percentage of the main species in the two trenches is closely similar (Bagust 1996). The dental age of the sheep was the subject of a dissertation by Caroline Jenkins (1996) and her records have been used here.

Potterne

A second deep midden mound in Wiltshire occupied during the Earliest Iron Age lies 15 km to the north-west of East Chisenbury at Potterne, although here the main deposit started to accumulate within the Late Bronze Age (Lawson 2000; Needham this volume). The site lies on the greensand ridge at the western extremity of the Marlborough Downs, at a focal point for routes across southern Britain from east to west. It is on the boundary of several soil types including greensand, lias and a chalk outcrop. Local conditions within the mound protected the bone from decay, and most is in good condition, though much of it is heavily mineralised. The data used here are based on the report (Locker 2000) and the unpublished records of eruption and wear on the sheep teeth.

Runnymede

There was dense and extensive settlement at Runnymede in the Late Bronze Age and Earliest Iron Age, with the bulk of the deposits in the Riverside Zone dating to the later part of the occupation sequence, i.e. after about 800 BC (Needham this volume). The site lies on the floodplain of the Thames, at its confluence with the River Colne; occupation seems to have been halted by flooding in the Early Iron Age. Calcareous silts were deposited over the settlement in the centuries following its abandonment, which have protected the deposits well. Bone assemblages from four areas of the settlement have been published (Done 1980; 1991; Serjeantson 1996) and the analysis of the material from a fifth area, the Riverside Zone, has been completed (Serjeantson *et al.* forthcoming). The estimate of the age at death is based on teeth and jaws from the Area 16 midden (Serjeantson 1996) together with those from the Riverside Zone, while the species numbers data take into account all areas of the site.

Sheep and their products

Both archaeologists and zooarchaeologists, when writing about settlements of the later prehistoric period, have been content to restate variations on ‘pigs were kept for meat, sheep were kept for wool and meat and cattle were kept for traction, and may also have been kept for milk’. For instance, in her survey of animal husbandry

in Iron Age Britain, Hambleton concluded that 'Cattle and sheep appear to have been managed for a variety of primary and secondary products' and refers to sheep milking as 'possible' (Hambleton 1999, 87; 90). Although sheep milking in prehistoric Britain has never been discussed in detail, Grant points out in her analysis of Danebury that 'If sheep milk was utilised, and with a high infant mortality, there may have been a reasonable amount of surplus milk available' (Grant 1984, 508). In her calculation of the economics of production, milk is considered, as well as wool and meat (Grant *et al.* 1991).

We cannot discuss how sheep were managed for the production of milk without also considering the other things which sheep provided: wool, manure and meat. The theoretical slaughter patterns of sheep flocks kept for different types of husbandry were summarised many years ago (Payne 1973), but the specialised patterns for milk and wool have rarely been recognised in archaeological samples either in the Mediterranean, where the original study was based, or in north-west Europe. Payne identified the expected age at death and sex ratio for flocks kept for different ends. In reality it is possible to identify the age of slaughter in an archaeological sheep assemblage, but very rarely possible to establish a sex ratio, as the bones of sheep are not so clearly sexually dimorphic as those of the other domesticates.

Wool

Wool and woven cloth were clearly of major importance in the Late Bronze Age: evidence for weaving equipment is widespread and by the end of the first millennium BC, wool plaids were among the exports from Britain to the continental areas of the Roman Empire. What is less often appreciated is that the first evidence for woven textiles containing a significant percentage of woolly fibres seems to be found only from the Early Bronze Age (Ryder 1992; 1993). Ryder has studied the scraps of woven cloth (some adhering to metal objects) from sites in continental Europe dating from the Neolithic period onwards and has shown that the earliest cloth was made from flax rather than wool. The sheep first introduced to Britain in the Neolithic had a hairy rather than a woolly coat. The fleece of wild sheep is made up of two types of fibre: longer, hairy

fibre strands interspersed with, and dominant over, shorter woolly fibres. Both wool and flax can be made into woven fabrics, but wool has a characteristic twist, which allows it to be spun and woven into better quality material. It appears that at some time in the third or second millennium BC, a type of sheep evolved – probably somewhere in the Near East – in which the coat was predominantly woolly rather than hairy, with the woolly fibres lengthening and eventually dominating over the hairy fibres. Whether this arose as a consequence of selective breeding over many generations or whether it arose accidentally is not relevant here, since the change almost certainly occurred elsewhere. No traces of Bronze Age wool have yet been found in Britain, but finds of spindle whorls and loom weights are ubiquitous from this time onwards. The woolly type of sheep was presumably introduced to Britain at some point in the second millennium BC.

The best quality wool comes from adult sheep, and that from wethers (castrated male sheep) is of better quality than that from ewes. In a flock of sheep in which the production of wool was the main aim, as many adult animals as possible will be kept, and the flock would include wethers as well as ewes. Darling (1945) suggests that in largely self-sufficient flocks, wethers can profitably be kept to two or three years, i.e. until they are fully adult, and still have a sale value for meat. There would be no incentive to keep a larger rather than a smaller type of animal, since – where grazing is restricted – more, smaller sheep yield more wool than small numbers of larger individuals.

Milk

Ryder (1983) carried out an exhaustive survey of the different regimes under which sheep have been kept throughout the world. It shows that in the most intensive milking regimes some of the ram lambs are killed off as early as two months, and in the less intensive regimes, where abundant grazing is available or where ewes were milked less intensively, lambs are kept until four to five months. In north-west Europe, they are kept until the end of the summer, or until the grass fails in the autumn. Cattle and goats are managed even more intensively for milk than are sheep: (male) calves and kids are often slaughtered within a few days of birth so that all the

milk is available for the herder, but Ryder's survey found no examples of this very early slaughter among sheep flocks. The only example of the deliberate slaughter of newborn lambs was when one of twins might be killed. The rennet which is found in the stomach of newborn lambs is sometimes used as a starter for the season's cheese making.

In a milking sheep flock the peak ages of slaughter occur at two to four months, and among the older adults. A milking flock includes just a few rams and no wethers, and, just as with cattle, greater quantities of milk can be obtained from more smaller animals rather than fewer larger ones.

Manure

The dung of sheep is of better quality for manuring cereal fields than that of cattle or pigs. If sheep are herded by day on more distant pastures and are brought into the fields at night, the quality of the manure is enhanced because the nutrients in the plants eaten elsewhere are carried to the field. We should expect sheep to be kept in large numbers compared to other domestic animals when dung is an important product. The composition of the flock in terms of age and sex is less important than the need for large numbers of animals. Again, there would be no incentive to keep fewer larger animals rather than more smaller animals.

Meat

Where the presence of towns and a market calls for the regular provision of meat, animals are raised only to optimum size for sale. Although Bronze Age shepherds were not raising animals for a market, there is likely to have been some exchange of stock between settlements, including some for consumption. It has been argued that Bronze Age and Iron Age communities kept sheep for meat, because they wanted to have a smaller animal which was appropriate for consumption on a domestic scale (Hill 1995). In this case, there are not necessarily constraints on the age and sex of the animals. It is more likely, however, that a community which commanded enough grazing and fodder to raise animals for meat, would have raised pigs rather than sheep, since they produce a greater quantity of meat over a shorter time. In a flock raised to

supply animals for a meat market, where the quality of the meat and the economics of sheep raising dictate the age of slaughter, the best time of slaughter in small stock is reached in the course of, or at the end of, the second summer. The ram lambs are castrated and raised to about 18 months for this market, while ewes again will be kept until older. In this case larger animals provide better meat than smaller animals.

The zooarchaeology of Bronze Age sheep

Sex ratio

Few sites have large enough samples of the bones which are clearly dimorphic between males and females, the pelvis and the horn core, as neither bone survives well. Danebury is one of the few sites which provided a sex ratio; as might be expected, there were more females than males.

Size

Pitt-Rivers was the first archaeologist to identify the fact that Iron Age sheep in Britain were very small. All the work done since has confirmed this observation. Late prehistoric sheep were both short-legged and slight of build. Sheep in the fourth and third millennia BC had been rather larger and the height of withers diminished during the second millennium BC. A small animal is an advantage for wool and milk, but less so for meat.

Age at death

The most useful source of information is age at death. This is determined by recording tooth wear, although there is currently more than one method in use (Payne 1973; Grant 1982; Payne 1987). It has been possible to use the records from all the sites listed above and to relate them to Payne's (1973) nine stages of eruption and wear ([Table 1](#)). Although the stages are those of Payne, the descriptions of tooth wear refer to the illustrations of Grant (1982); the method of correlation is similar to that used by Hambleton (1999, 64–5). The ages quoted for the early stages of eruption and wear in [Table 1](#) are those illustrated by Simonds (1854); recent work by Gill Jones (2005) on flocks of primitive

breeds confirms these, but shows that in primitive sheep early wear can be delayed by some weeks. Some of the variations in the findings may be a consequence of different specialists using different methods of recording. If each specialist published the full records of eruption and wear for each mandible and isolated dP4 and M3 it would not only make comparisons between assemblages more reliable, but also save much time and space spent on discussion.

The age-stages at death of the sheep from eight of the sites discussed are shown in [Figure 1](#). Natural mortality can be expected at each age-stage, as many authors have noted, particularly in flocks kept in conditions where winter fodder was limited. It is especially likely that the perinatal jaws (Stage A) are from lambs that perished naturally. The presence of neonatal lambs in a bone assemblage has often been taken to suggest that lambing took place within the settlement, as for instance at Danebury (Grant 1984). It certainly indicates that the sheep were being closely herded within the settlement, at least during the lambing season. However, their absence may mean no more than that these fragile elements were destroyed before they became incorporated in the sediments at the site. In fact numbers are below 10% at each of the Late Bronze Age sites, a figure compatible with natural mortality in a breeding population.

Lambs killed at age-stage B are about two to three months of age. As we have seen, it was only in flocks which focussed strongly on milk production that some or all of the male lambs were killed off at this age. The lambs can be eaten, but the quantity of meat would be sufficient only for a single meal for a small family. Runnymede and East Chisenbury, have the greatest number of deaths at this age-stage.

At age-stage C, the lambs are between about three and nine months of age. One of the Grimes Graves middens and that at Potterne have high percentages of lambs of this age. If we look at the data in another way, at these sites and at Runnymede and East Chisenbury, between 40–50% of lambs were killed by the end of their first year, whereas at the other four sites, more than 70% were still alive into the second year and beyond. The former slaughter pattern may be similar at Wallingford, where half (four out of eight)

of the mandibles recovered in the Whitecross Farm excavations were from animals dead by Stage C. Since we can assume that in a temperate climate like that of Britain and Atlantic north-west Europe at this time, lambs will have been born in the spring (Legge and Dorrington 1987; Legge *et al.* 1991–2), these animals will therefore represent lambs slaughtered from about August onwards. This slaughter will mainly take place when the grass fails in the autumn, so that only the stock which the grazing can accommodate is kept through the winter. At Runnymede, half of all jaws assigned to Stage C are from lambs slaughtered when there was only a small amount of wear (Grant stage c) on the first cusp of the first permanent molar, reinforcing the argument that the main cull of the lambs was in the late summer or early autumn. Indeed Runnymede must be one of the few assemblages where the percentage of sheep killed below one year is higher than that of pigs (Serjeantson *et al.* forthcoming).

The heavy rate of slaughter in the first year strongly suggests that at these sites (Runnymede, East Chisenbury, Grimes Graves, Potterne and Wallingford), the sheep flocks were kept for milking and only limited numbers of ram lambs were kept beyond the first autumn. This conclusion differs from the original interpretations of the main role of sheep at both midden X at Grimes Graves and Potterne. The most intensive husbandry appears to have taken place at Runnymede and East Chisenbury. At the four remaining sites (the DoE midden at Grimes Graves, Brean Down, Dean Bottom, and Burderop Down), the mean age of slaughter is older. The age class in which the highest percentage of sheep was killed off is at age-stage D, i.e. in the second year, the age at which meat is of the highest quality. This second group shows less intensive sheep husbandry.

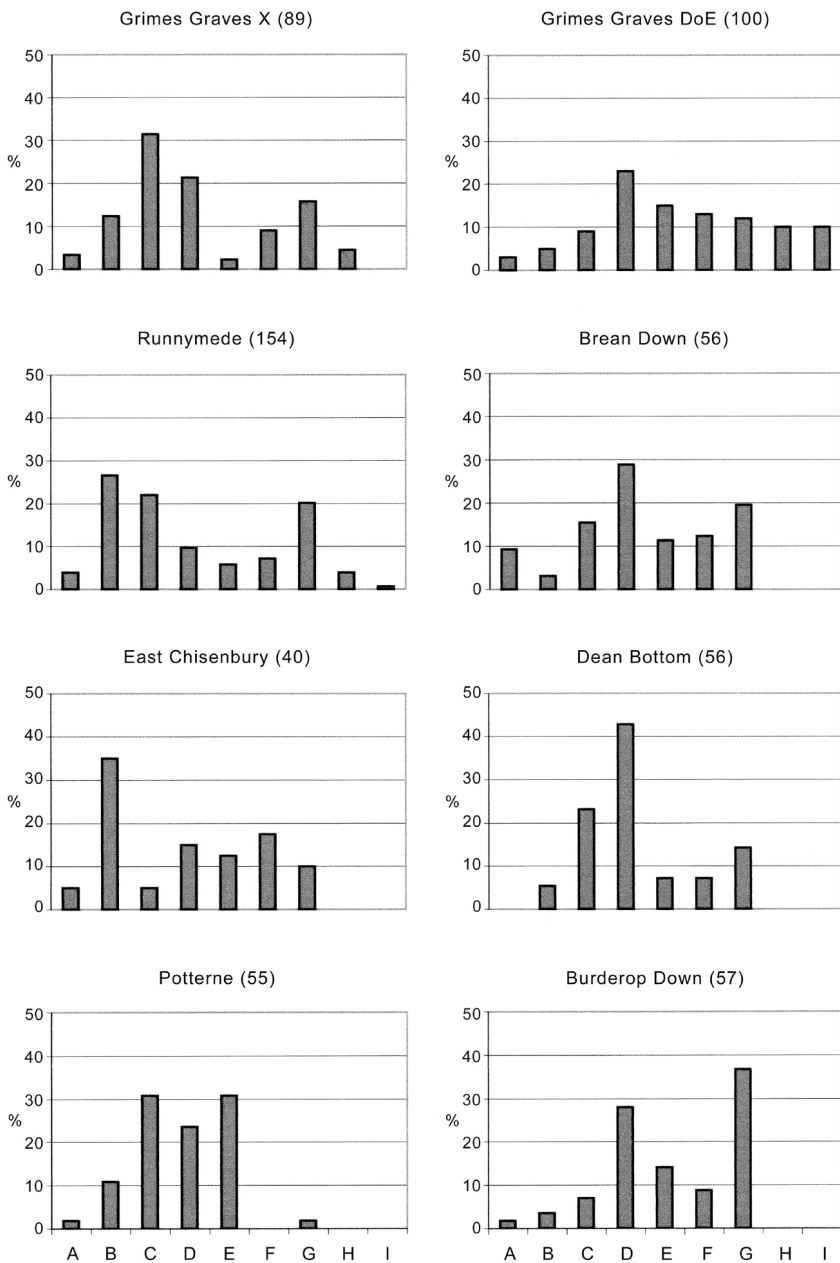


Fig. 1. Age at death of sheep (%) on Middle Bronze Age, Late Bronze Age and Earliest Iron Age sites (see [Table 1](#) for definitions of stages A-I).

<i>Stages of eruption and wear of jaw</i>	<i>Stages of wear on individual teeth</i>	<i>Approximate age</i>	<i>Slaughter</i>
A	dP ₄ not worn <i>Grant stage a</i>	0–4 weeks	One of twins to provide rennet
B	dP ₄ in wear <i>Grant stage b onwards</i> M ₁ erupting or unworn <i>Grant stage a</i>	2–3 months	Male lambs to release milk from ewe
C	M ₁ in wear <i>Grant stage b onwards</i> M ₂ erupting or unworn	3–9 months	Male lambs not kept for meat or wool
D	M ₂ in wear <i>Grant stage b onwards</i> M ₁ unworn	10–20 months	Males for meat
E	M ₁ in wear <i>Grant stage b–f</i>	20–34 months	Males for wool plus meat
F	M ₁ worn <i>Grant stage g</i>	3–4 years	Infertile ewes
G	M ₁ well worn <i>Grant stage b</i>	4–6 years	Old ewes
H/I	M ₁ heavily worn <i>Grant stage j onwards</i>	> 6 years	Old ewes

Table 1. *Age-stages for eruption and wear of teeth in sheep. Jaw-stages after Payne (1973), definition of wear-stages of individual teeth after Grant (1982) and approximate age after Simonds (1854) and Payne.*

With wool being such a valuable commodity at this time, it is surprising that so few assemblages show a high percentage of animals killed after the third summer (Stages E and F), the recommended age for culling wethers for both wool and meat. The only site with a high percentage of sheep at this stage is Potterne.

Most of the settlements also have evidence for consumption at the end of the productive lives of adult and old ewes (Stages G–I). The only site that is quite exceptional is Potterne, where almost no fully adult or old sheep were eaten. The implication is that this was not a subsistence flock and that those who lived at Potterne did not depend upon the flocks of sheep they raised. Indeed this may have been the case at the other three sites with a high cull of lambs in the first year.

Numbers

Numbers of sheep, cattle, and pigs at the sites discussed are shown in [Figure 2](#). The number of identified fragments (NISP) has been used in the comparison, as some researchers did not calculate a minimum number of individuals (MNI) or publish data which

allowed it to be calculated. As is well known, NISP tends to underestimate the numbers of the smaller domestic animals (pigs and sheep) relative to cattle; indeed, the worse the conditions for bone survival at a site, the more likely it is that the relative numbers will suggest that a lower percentage of sheep and pigs were slaughtered than was in fact the case. The assemblage from the Riverside Zone at Runnymede is shown separately from the other groups ('other areas').

Cattle are most frequent in the two Grimes Graves assemblages and at Bishop Cannings Down, but the relative numbers seen at Dean Bottom, Burderop Down, and East Chisenbury – with sheep much more frequent than the other two species – are more characteristic of the later first millennium BC. The Late Bronze Age/ Early Iron Age sites of Potterne, Wallingford, and Runnymede have approximately equal numbers of the three species, with fewest cattle at Potterne and Wallingford. The general increase in numbers of sheep in the second millennium BC must be associated, as many have argued, with the increased area under cultivation, and may also reflect the increasing usefulness and value of wool. The data are also shown in [Table 2](#). 'Many' and 'few' are used relatively: 'many' cattle and sheep refers to proportions higher than 60%, while 'many' pigs refers to 30% or more. 'Few' pigs is fewer than 10%, while 'few' cattle and sheep is fewer than 30%.

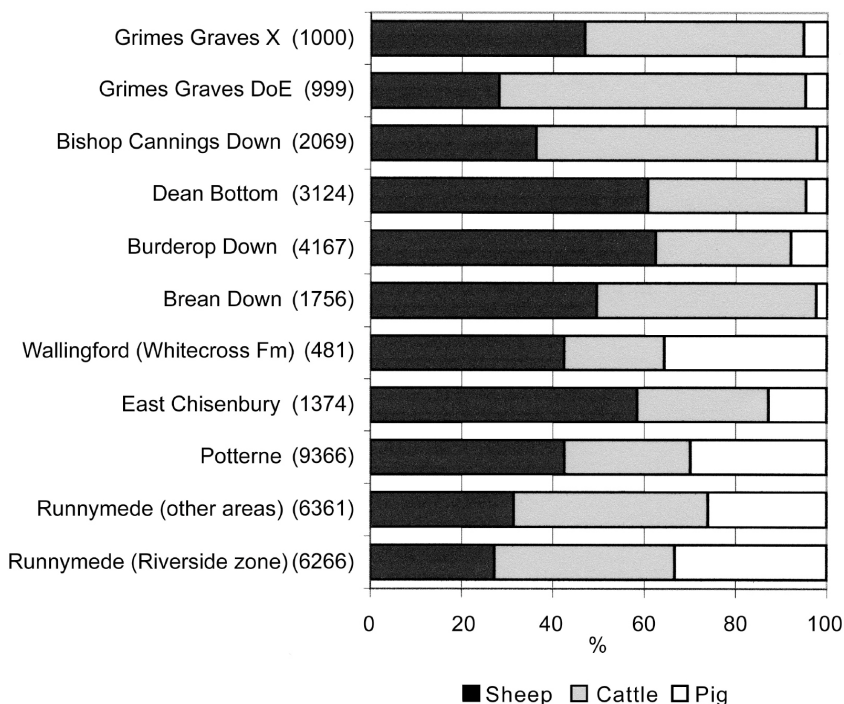


Fig. 2. Percentage of sheep, cattle and pigs on Middle Bronze Age, Late Bronze Age and Earliest Iron Age sites (sample size in brackets).

Discussion

The contrasts between the sites are too great to be a function of chance or recovery. At some, the percentage of lambs in the age group consistent with intensively managed milk flocks is too high to represent chance or natural mortality, and must instead represent deliberate management of the flock. This ‘particularly sharp’ management (Halstead 1989) can carry the risk that insufficient animals are retained for replacing the flock. In self-sufficient flocks, the risk is mitigated by keeping more sheep until they are mature, but here I suggest that the risks were buffered by other means. Most of the food eaten was grain and dairy products, and other domestic animals were kept. More significantly, the sites probably had roles as central places and were able to call on sheep from settlements elsewhere to replenish the flock.

Most of the sites with high percentages of lambs do not have many sheep, suggesting that sheep were not the mainstay of the

settlement. East Chisenbury is the exception: there numbers suggest that sheep husbandry was a major activity at the site. Whatever the quality of wool, it was certainly used for clothing and other purposes, so it is perhaps surprising that no site of the period has the mainly older sheep which would be expected when the wool crop is of major importance. It does not look as if any of these flocks were kept mainly for wool, which must mean that sufficient wool could be obtained from the flocks as a consequence of their sheer numbers. All but one of the sites do have some older sheep; the sites on the high downland are those where sheep seem to have been kept to the greatest age, and presumably it was at these sites that most wool was obtained.

Pigs

As will be evident from [Figure 2](#), some of the sites discussed here have an exceptionally high percentage of pig bones. If cattle are excluded from the comparison, the two smaller domesticates which are similar in size and potential for bone survival can be more clearly compared. [Figure 3](#) shows numbers of pig bones as a percentage of pig and sheep: in all but one of the assemblages, sheep outnumber pigs. However, three assemblages stand out as having exceptionally high percentages (over 40%) of pig bones: these are from Wallingford, Potterne, and both areas of the Runnymede settlement. The remaining sites have much more typical percentages: all have below 20% of pig and indeed most have below 10%. The three sites stand out, because after the third millennium BC it is very rare to find pigs in such high numbers in southern Britain. Among the dozens of Iron Age sites in her survey, Hambleton (1999) identified only one in southern England (Groundwell Farm, Wiltshire) where the percentage approaches that of these Late Bronze Age sites. In the south of England, high percentages of pig are found only in the Later Neolithic; in some assemblages from Roman towns; and in the centuries immediately following the Norman conquest at certain high-status sites. Such high figures are more characteristic of north-west Europe, for instance at Iron Age sites in northern France (Meniel 1987) and the Netherlands (Ijzereef 1981).

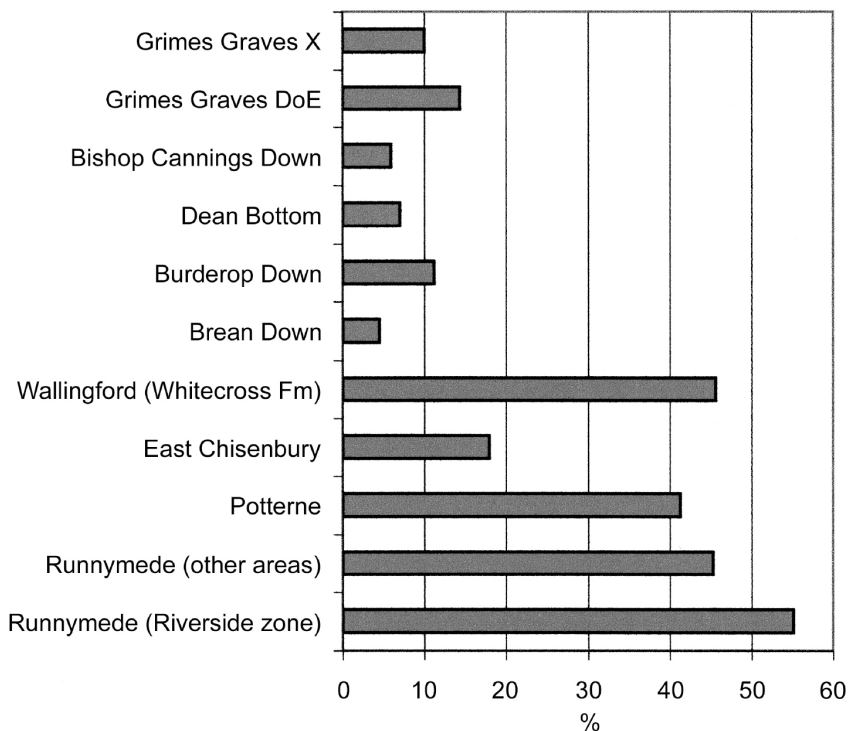


Fig. 3. Pig bones as a percentage of sheep and pig on Middle Bronze Age, Late Bronze Age and Earliest Iron Age sites.

Why are pig numbers so high at these sites? Whilst the marshy land in the vicinity of Runnymede would have been ideal for pig raising (Robinson 1991), the environment alone cannot account for the high numbers of pigs there (Serjeantson 1996). Wallingford and particularly Potterne were situated in areas surrounded by good light soils used for cultivation and grazing, which would not have been particularly favourable to pigs. We therefore have to look elsewhere for an explanation. Anthropologists recognise that feasting is an important feature of communal life in many societies, and the provision of food on a lavish scale is a way in which an elite can command the loyalty of their followers. As many writers have pointed out, pigs are supremely suitable to raise for meat and hence to provide meat for feasting (Serjeantson 1996; Albarella and Serjeantson 2002). The raising of pigs would have been somewhat of a luxury in southern Britain in later prehistory; they are liable to be in competition with the use of land for cultivation. It is likely

that the high numbers of pigs indicate that they were raised for feasting, which in turn might reflect wealth and high status on the part of the occupants of these settlements.

Discussion

Dairying

Previous discussions of husbandry at these Later Bronze Age sites have concentrated almost exclusively on cattle. The main conclusion to be drawn from this study is that sheep husbandry, like cattle husbandry, became more intensive in the Middle and Late Bronze Age, with some sheep flocks being closely managed for milk. In the south of Britain, the middle of the second millennium BC seems to be the earliest period at which this practice occurs, a development which fits within the context of agricultural intensification as a whole. Elsewhere in Europe, however, sheep milking has been identified from Neolithic animal bone remains: at Arene Candide in northern Italy (Rowley-Conwy 1997); and at Twann and St Aubin IV in Switzerland (Halstead 1989). It is recognised that from the middle of the second millennium BC pressure on space – arable land – is found for the first time in southern Britain. This would have imposed limitations on the numbers in a herd or flock, and that too would have provided a spur to intensification of the management of herds for secondary products. In north-west Europe, grazing and fodder is limited in winter, more so as the climate deteriorated, and hard decisions had to be made each autumn about the numbers of animals which could be kept over the winter.

One feature which Runnymede shares with the Wiltshire midden mounds of Potterne and East Chisenbury is the presence of quantities of dung (McOmish 1996; Needham and Spence 1997). At Runnymede this is evident from the organic sediments and insect fauna (Robinson 1991). The most likely origin of this is the flocks of sheep (and cattle), which will have been brought in at night and for milking, and perhaps kept there for longer periods while lambing (and calving) took place.

The milk of sheep can be made into cheese, butter and other products (Ryder 1983; 1984) just as can that of cattle. When salt is

added to cheese and butter, those products can be stored, and indeed it is in the later second millennium BC that salt production becomes widespread (Morris 1994). Some types of butter and cheese can be stored for months – sometimes even longer – and can therefore be used to help survive the lean months of winter. They are also easy to transport between settlements.

One reason why the importance of dairy foods (from both cattle and sheep) in prehistoric Britain has been underestimated is that too much reliance may have been placed on the comments of Strabo (*Geography* IV.5.1), who wrote that the Britons drank milk but did not make cheese. This can now be seen as highly implausible. Did his information come from those who had visited the far west of the British Isles, where soils and climate were less favourable to cultivation, and more suited to pastoral farming, and where raw milk – as well as butter and cheese – may indeed have been consumed? In southern Britain it is more likely that butter and cheese were the important products. Or does the comment imply that the Britons did not make hard cheeses of the type familiar in Rome?

Husbandry

Pryor (1996) has argued convincingly that the size of the sheep flocks found around the Fens in the Late Bronze Age must have numbered in the hundreds. Although bone remains from settlements cannot indicate the absolute size of herds and flocks, the likelihood that flocks at some settlements were not self-sufficient but formed part of larger groupings, offers some support for this view.

The intensified management suggests that the type of shepherding practised in the Later Bronze Age was closer to what Ryder (1983, 655) defines as ‘sedentary’ husbanding. In southern Britain in the second and first millennia BC there was no reason for long-distance movement or transhumance, as there were no climatic extremes or strong contrasts in the terrain. It may well be that in earlier millennia herds and flocks were moved around a wide area of land in the course of a year, but in areas where arable cultivation occupied increasingly large tracts of land, this will have given way to static husbandry. The sheep will have continued to be moved between pastures, either as a complete flock or segregated between

age classes and sexes. However, as Pryor (1996) has argued, distances between pastures are unlikely to have been more than a few kilometres.

The build up of midden material at some of the sites show that stock was not kept on the fields and pastures, but were brought within the inhabited area. This is not necessary when stock are raised extensively with little handling (as are hill sheep in Britain today), but is what would be expected when they are brought within the settlement for milking. Large areas of grazing, particularly woodland grazing, allowed some stock to be over-wintered beyond the settlement, but animals being milked needed shelter and possibly the provision of fodder in winter. Nevertheless, why the middens were allowed to build up remains an enigma. Why was the manure not strewn on the fields? McOmish (1996) has argued that the middens were visible evidence of wealth and status (as they no doubt were), but a more practical explanation is that the normal custom for the farmers of taking the animals to the fields continued to prevail, and that removing all the dung onto the fields was not yet a routine practice.

Complementary sites

A second and related conclusion is that the patterns of sheep and cattle management and pig keeping we see at the sites under discussion are not due to chance, but represent complementary activities (Table 2). The sites do not group by date or location, except for the few with high percentages of pigs (Runnymede, Potterne, Wallingford), which all belong to the Late Bronze Age/ Earliest Iron Age. Otherwise, the nature of herds and flocks varies within an area, as do their relative size and management.

	<i>No. of pigs</i>	<i>Cattle husbandry</i>	<i>Sheep husbandry</i>	<i>No. of cattle</i>	<i>No. of sheep</i>
Grimes Graves DoE	few	intensive	unintensive	v. many	v. few
Grimes Graves X	few	intensive	intensive	many	few
Bishop's Cannings	few	intensive	unintensive	v. many	v. few
Dean Bottom	few	intensive	unintensive	few	many
Burderop Down	few	unintensive	unintensive	v. few	many
Brean Down	few	?unintensive	?unintensive	few	many
East Chisenbury	few	?	intensive	few	many
Wallingford	many	?	?intensive	v. few	few
Potterne	many	unintensive	intensive	few	few
Runnymede	many	unintensive	intensive	few	v. few

Table 2. Interpretation of animal husbandry on settlements of Middle and Late Bronze Age and Earliest Iron Age date. See text for definition of 'many' and 'few'.

The sites with pigs stand out as the 'wealthiest', particularly when this occurs alongside intensive sheep husbandry, as at Runnymede, Potterne, and perhaps Wallingford. By this criterion Potterne stands out as the 'wealthiest' of the three in terms of animals consumed on site, with remarkably few older sheep. These sites must have been able to pull in resources from neighbouring sites. The main flocks may have been kept at other smaller settlements and the surplus ram lambs brought to the main settlement, perhaps as tribute. Maltby (1992) made the same suggestion for the three settlements on the Marlborough Downs which he studied. They have contrasting bone assemblages despite the fact that they are in fairly similar environments. Maltby noted that Burderop Down (the largest of the three) 'may have acted as a centre for... redistribution of animals between sites'. Reconsideration of the dating of these sites no longer sees them as contemporary, so the suggestion may not stand, although the principle that sites were complementary to one another certainly does.

The contrasting nature of agricultural practice at different sites is as much an indication of site hierarchy as is material culture. This – together with the greater input of labour that is necessary when animals are milked rather than kept for other uses – fits well within the notion of a ranked society, where the powerful individuals at the top of the hierarchy were able to extract tribute from farmers and perhaps even slaves, which was then consumed or redistributed. The wealthier settlements at the top of the pyramid were able to indulge in feasting, while the less wealthy provided services, animals and products.

Feasting

Several excavators have recently proposed that animal bones found in quantity among domestic refuse at midden sites represent evidence for feasting. McOmish (1996) considers that the sheer quantity of material at East Chisenbury must indicate that feasting took place. Rather than suggesting that the quantity of bone alone can be taken to suggest feasting, I have argued elsewhere (Albarella

and Serjeantson 2002) that the species present, and the age at which animals were killed, provide a better indication.

As discussed above, pigs are highly suitable to raise for feasting. There was a short-lived period at the end of the Late Bronze Age and in the Earliest Iron Age, when pigs were raised in high numbers at a few sites in southern Britain. It is likely that Runnymede, Wallingford and Potterne saw repeated occasions of feasting with plenty of pork available. However it would be unrealistic to suppose that such occasions did not take place at other settlements; if so, the meat of other animals must have been provided for feasting, even if it did not take place on the same scale. The sites where there was selection of sheep for slaughter in the second year (Potterne, the DoE midden at Grimes Graves, Brean Down, and Dean Bottom) were able to select prime animals for consumption. It is also worth remembering that consumption of different types of meat is seasonal: pigs are best slaughtered and eaten in winter, when the meat is less likely to become tainted, while lambs may be eaten in summer. The two- to five-month-old lambs would have provided good quality meat, although each animal would have provided only a small quantity.

What the animal remains in isolation cannot tell us is whether the consumption of meat – whether of pigs or other domestic animals – was confined to ritual occasions. Both pigs and lambs may be appropriate for consumption at domestic rituals, and older pigs and sheep provide meat for more than one family. Grant (1984) has observed that some peoples kept flocks of goats in order to provide animals for the various sacrifices which were required during the year. It may indeed be the case that pigs were managed specifically for this purpose in the Late Bronze Age. However, it seems very unlikely that sheep were managed for this purpose. It was the necessity of obtaining milk rather than meat that accounts for the high percentage of lambs killed off in the first few months at some sites.

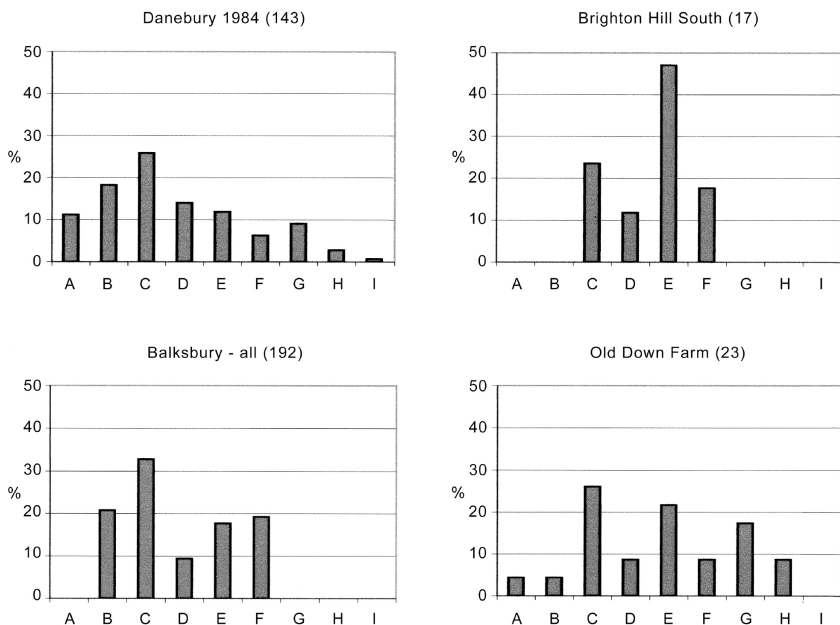


Fig. 4. Age at death of sheep (%) on Early Iron Age sites. Stages as [Figure 1](#).

Trade and exchange

As argued above, Bronze Age animal husbandry must have relied on the exchange of stock between settlements. However, the Middle and Late Bronze Age economy in southern Britain was also producing storable food products, not only cereals but also butter and cheese. The grain produced in excess at some settlements will have been moved between sites, and it is likely that some of the butter and cheese was similarly exported from producer to consumer sites. If Bronze Age social organisation became increasingly hierarchical, those at the top of the pyramid must have been in a position to exact services from others in the population, including agricultural work and tribute, including tribute in kind. Although wool will have been the most valuable animal product for exchange, dairy products will also have featured in the exchanges of goods that are characteristic of ranked societies.

What happened in the Iron Age?

Almost no Iron Age sites in southern Britain have more than a small percentage of pigs. The percentage of sheep relative to both pigs

and cattle rises further during the Iron Age, especially on downland sites. Hambleton (1999) identifies the highest percentages on the chalklands of Wessex, but numbers are also high in the Thames valley and eastern Britain. Only the west of Britain continues to have cattle in any number. In general, in southern Britain there are fewer contrasts between Iron Age sites with regard to the relative numbers of domestic animals. There are also many Iron Age sites, especially in Wessex, which continue to have high percentages of young lambs.

Figure 4 shows the age at death of sheep in two large and two smaller Early Iron Age assemblages. At Balksbury (Maltby 1995) and Danebury (Grant 1984), approximately 50% of the flock had been killed by the end of the first autumn. At Balksbury, 20% of the lambs were killed off at about two months, and at Danebury the figure for the Early Iron Age is just below 20%. It appears that sheep milking continued into the later part of the first millennium BC, and at some sites possibly as intensively as in the Late Bronze Age. In her first report, Grant (1984, 460) came to the conclusion that there was 'no indication of specialisation' in sheep husbandry at Danebury, but the high rate of slaughter of young lambs is hard to reconcile with an economy that is not managing its sheep intensively, which must imply some specialisation. Grant suggested that the high cull could be explained by the existence of complementary sites in the vicinity, but in fact a number of settlements around the hillfort have now been examined, and most have similar assemblages to Danebury itself (Cunliffe 2000).

Over the Iron Age as a whole, however, the peaks in age at death for sheep are less emphasised, as Hambleton (1999) has shown, whilst at Danebury husbandry seems to have changed over time. The intensive husbandry at some Iron Age sites suggests that pressure on communities to maximise their output from the animals as well as the fields continued during the later first millennium BC. Communities continued to have to work harder to obtain food from their agricultural and grazing lands. The cattle and sheep husbandry, together with the scant evidence for pigs, suggests that they continued to rely heavily on dairy products, and not meat, for part of the food supply.

Conclusion

Much has been written about husbandry in Iron Age Britain, but there has been little discussion of how the patterns seen in the Iron Age were prefigured in the centuries before 600 BC. In this paper, I have analysed the particular character of sheep and pig keeping at the end of the Bronze Age in the south of Britain. There are some strong contrasts between sites even within one region, with pigs being found at a few sites in unusually high numbers. Earlier work has shown that at some sites, cattle were kept mainly for milk. Here, using the same arguments, I have shown that sheep were maintained in a manner which suggests that they too were specialised for the production of milk at some settlements, a possibility that prehistorians have not seriously taken into account. The ability to specialise, and to keep contrasting herds and flocks, must reflect the diverse social and economic links that characterised Bronze Age societies.

The transformation of Bronze Age to Iron Age economies in Britain seems in part at least to have been brought about by a collapse of the prevailing bronze standard (Needham this volume), a collapse which can also be seen in animal husbandry. Settlements could no longer support pig keeping on any scale, as each one became more self-sufficient, although the intensive management of herds and flocks continued. The more fragmented societies and deteriorating climate of the early first millennium BC provided less freedom for communities to specialise at different settlements.

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Bibliography

- Albarella, U. and Serjeantson, D. 2002. A passion for pork: butchery and cooking at the British Neolithic site of Durrington Walls, in P. Miracle (ed.), *Consuming Passions and Patterns of Consumption*, 33– 49. Cambridge: MacDonald Institute.
- Bagust, J. 1996. *The Animal Bones from East Chisenbury, Wiltshire: Ritual Rubbish or Simply a Midden Deposit?* Unpublished M.A. thesis, University of Leicester.
- Boserup, E. 1965. *The Conditions of Agricultural Growth*. London: Allen and Unwin.
- Brown, G., Field, D. and McOmish, D. 1994. East Chisenbury Midden complex, in A. Fitzpatrick and E. Morris (eds), *The Iron Age in Wessex: Recent Work*, 46–49. Salisbury: Trust for Wessex Archaeology.
- Clutton-Brock, J. (ed.) 1989. *The Walking Larder: Patterns of Domestication, Pastoralism and Predation*. London: Unwin Hyman.
- Copley, M.S., Berstan, R., Dudd, S., Docherty, G., Mukherjee, A.J., Straker, V., Payne, S., and Evershed, R. 2003. Direct chemical evidence for widespread dairying in prehistoric Britain, *Proceedings of the National Academy of Sciences* 100, 1524–1529.
- Coppock, J.T. 1976. *An Agricultural Atlas of England and Wales*. London: Faber.
- Cromarty, A.M., Barclay, A., Lambrick, G. and Robinson, M. 2006. *Late Bronze Age Ritual and Habitation on a Thames Eyot at Whitecross Farm, Wallingford: the Archaeology of the Wallingford Bypass 1986–92*. Oxford: Thames Valley Landscapes Monograph 22.
- Cunliffe, B. 2000. *The Danebury Environs Programme. The Prehistory of a Wessex Landscape, Vol. 1. Introduction*. Oxford: Oxford University Committee for Archaeology Monograph 48.
- Dahl, G. and Hjort, A. 1976. *Having Herds: Pastoral Herd Growth and Household Economy*. Stockholm: Department of Social Anthropology.
- Darling, F.F. 1945. *Crofting Agriculture*. London: Oliver and Boyd.
- Done, G. 1980. The animal bone, in D. Longley (ed.), *Runnymede Bridge 1976: Excavations on the Site of a Late Bronze Age Settlement*, 74–79. Guildford: Surrey Archaeological Society Monograph 6.
- Done, G. 1991. Section C: 18. The animal bone, in Needham 1991, 327–342.
- Dudd, S. and Evershed, R. 1998. Direct demonstration of milk as an element of archaeological economies, *Science* 282 (November 1998), 1478–1480.
- Grant, A. 1982. The use of tooth wear as a guide to the age of domestic ungulates, in B. Wilson, C. Grigson and S. Payne (eds), *Ageing and Sexing*

- Animal Bones from Archaeological Sites*, 91–108. Oxford: British Archaeological Reports British Series 109.
- Grant, A. 1984. Animal husbandry, in B. Cunliffe (ed.), *Danebury: an Iron Age Hillfort in Hampshire, Vol. 2. The Excavations, 1969–1978: The Finds*, 496–548. London: Council for British Archaeology Research Report 52.
- Grant, A., Rush, C. and Serjeantson, D. 1991. Animal husbandry, in B. Cunliffe and C. Poole (eds), *Danebury: an Iron Age Hillfort in Hampshire, Vol. 5. The Excavations 1979–1988: the Finds*, 447–487. London: Council for British Archaeology Research Report 73.
- Halstead, P. 1989. Like rising damp? An ecological approach to the spread of farming in southeast and central Europe, in A. Milles, D. Williams and N. Gardner (eds), *The Beginnings of Agriculture*, 25–53. Oxford: British Archaeological Reports International Series 496.
- Hambleton, E. 1999. *Animal Husbandry Regimes in Iron Age Britain*. Oxford: British Archaeological Reports British Series 282.
- Hill, J.D. 1995. *Ritual and Rubbish in the Iron Age of Wessex*. Oxford: British Archaeological Reports British Series 242.
- Ijzereef, G.F. 1981. *Bronze Age Animal Bones from Bovenkarspel: the Excavations at Het Valkje*. Amersfoort: Rijksdienst voor het Oudheidkundig Bodemonderzoek, Nederlandse Oudheden 10.
- Jenkins, C. 1996. *Do the Sheep Remains from East Chisenbury Support the Hypothesis for Sheep Milking in Southern Britain in the First Millennium BC?* Unpublished B.A. dissertation, University of Southampton.
- Jones, G. 2005. Tooth eruption and wear observed in live sheep from Butser Hill, the Cotswold Farm Park and five farms in the Pentland Hills, UK, in D. Ruscillo (ed.), *Recent Advances in Ageing and Sexing Animal Bones (Proceedings of the 9th ICAZ conference, Durham 2002)*. Oxford: Oxbow Books.
- Lawson, A.J. 2000. *Potterne 1982–5: Animal Husbandry in Later Prehistoric Wiltshire*. Salisbury: Wessex Archaeology Report 17.
- Legge, A.J. 1981. Chapter V. The Agricultural Economy, in R. Mercer (ed.), *Grimes Graves, Norfolk: Excavations 1971–72*, 79–103. London: HMSO.
- Legge, A.J. 1992. *Animals, Environment and the Bronze Age Economy*. London: British Museum Press.
- Legge, A.J. and Dorrington, E. 1987. Harlow Temple: the animal bones, in N.E. France and M. Gobel, *The Romano-British Temple at Harlow, Essex*, 122–133. Harlow: West Essex Archaeological Group.
- Legge, A.J., Williams, J. and Williams, P. 1991–2. The determination of season of death from the mandibles and bones of the domestic sheep (*Ovis aries*), in R. Maggi, R. Nisbet and G. Barker (eds), *Archeologia della Pastorizia nell'Europa meridionale (Tavola Rotonda Internazionale 1989, Chiavari)*, 49–65. Bordighera: Rivista di studi Liguri 56/57.

- Levitan, B. 1990. The vertebrate remains, in M. Bell, *Brean Down Excavations 1983–87*, 220–241. London: English Heritage Archaeological Report 15.
- Locker, A. 2000. Animal bone, in Lawson 2000, 101–117.
- Maltby, M. 1992. The animal bone, in C. Gingell, *The Marlborough Downs: a Late Bronze Age Landscape and its Origins*. 137–42. Devizes: Wiltshire Archaeological and Natural History Society Monograph 1.
- Maltby, M. 1995. Animal bones, in G.J. Wainwright and S.M. Davies (eds), *Balksbury Camp, Hampshire: Excavations 1973 and 1981*, 83– 87. London: English Heritage Archaeological Report 4.
- McOmish, D. 1996. East Chisenbury: ritual and rubbish at the British Bronze Age–Iron Age transition, *Antiquity* 70, 68–76.
- McOmish, D. 1998. Landscapes preserved by the men of war, *British Archaeology* 34, 12–13.
- Meniel, P. 1987. *Chasse et Elevage chez les Gaulois (450–52 av. J.-C.)*. Paris: Editions Errance.
- Morris, E.L. 1994. Production and distribution of pottery and salt in Iron Age Britain: a review, *Proceedings of the Prehistoric Society* 60, 371–393.
- Mulville, J. and Outram, A. 2005. *The Zooarchaeology of Fats, Oils, Milk and Dairying*. Oxford: Oxbow Books.
- Needham, S.P. 1991. *Excavation and Salvage at Runnymede Bridge 1978: The Late Bronze Age Waterfront Site*. London: British Museum Press.
- Needham, S. and Spence, T. 1997. Refuse and the formation of middens, *Antiquity* 71, 77–90.
- Payne, S. 1973. Kill-off patterns in sheep and goats: the mandibles from Asvan Kale, *Anatolian Studies* 23, 281–303.
- Payne, S. 1987. Reference codes for wear states in mandibular cheek teeth of sheep and goats, *Journal of Archaeological Science* 14, 609–614.
- Powell, A. and Clark, K. 2006. Animal bone, in Cromarty *et al.* 2006, 105–110.
- Pryor, F. 1996. Sheep, stockyards and field systems: Bronze Age livestock populations in the Fenlands of eastern England, *Antiquity* 70, 313–324.
- Robinson, M. 1991. Neolithic and Late Bronze Age insect assemblages, in Needham 1991, 277–326.
- Rowley-Conwy, P. 1997. The animal bones from Arene Candide: final report, in R. Maggi (ed.), *Arene Candide: A Functional and Environmental Assessment of the Holocene Sequence (Excavations Bernabò Brea-Cardini 1940–50)*, 153–277. Rome: Memorie dell'Istituto italiano di paleontologia umana nuova serie 5.
- Ryder, M.L. 1983. *Sheep and Man*. London: Duckworth.
- Ryder, M.L. 1984. Sheep – an animal of many parts, *Popular Archaeology*

(March 1984), 26–31.

- Ryder, M.L. 1992. Iron Age, haired, animal skins from Hallstatt, Austria, *Oxford Journal of Archaeology* 11, 55–67.
- Ryder, M.L. 1993. Sheep and goat husbandry with particular reference to textile fibre and milk production, in J.N. Postgate and M.A. Powell (eds), *Domestic Animals of Mesopotamia, Part 1, Bulletin of Sumerian Agriculture* 7, 9–32.
- Serjeantson, D. 1996. The animal bones, in S.P. Needham and T. Spence, *Refuse and Disposal at Area 16 East, Runnymede (Runnymede Bridge Research Excavations 2)*, 194–223. London: British Museum Press.
- Serjeantson, D., Iles, M. and Rielly, K. forthcoming. Late Bronze Age animal bones from the Riverside Zone, in S.P. Needham and T. Spence (eds), *Structure and Meaning in the Eighth Century BC at Runnymede (Runnymede Bridge Research Excavations 3)*. London: British Museum Press.
- Simonds, J.B. 1854. The Age of the Ox, Sheep and Pig, *Journal of the Royal Agricultural Society of England* 15, 276–362.
- Smith, R. 1995. *The Great Cheeses of Britain and Ireland*. London: Aurum Press.
- Thomas, R., Robinson, M., Barrett, J. and Wilson, B. 1989. A Late Bronze Age riverside settlement at Wallingford, Oxfordshire, *Archaeological Journal* 143, 174–200.
- Trow-Smith, R. 1957. *A History of British Livestock Husbandry to 1700*. London: Routledge.

After 'Celtic' fields: the social organisation of Iron Age agriculture

Richard Bradley and David Yates

Introduction (RB)

Time plays strange tricks on our projects. With the revival of interest in prehistoric farming that took place in the 1960s and 1970s, Peter Fowler and Collin Bowen began to investigate the Iron Age occupation of Fyfield and Overton Downs. Here was an extensive area of chalk that had preserved much of the ancient landscape intact. It provided the ideal counterpart to the excavations of Iron Age settlements that were taking place at the time. Here there were enclosures, land boundaries and a hillfort; and, drawing them together, there were 'Celtic' fields.

The work that took place three decades ago set the agenda for much of our understanding of the Iron Age landscape in southern England, including the experimental programme developed at the Butser Ancient Farm (Reynolds 1979). It showed how individual plots had developed and how larger groups of fields might have been organised. It laid the foundations for a new study of land boundaries and it helped to elucidate the spatial organisation of the late prehistoric countryside. The only problem was the loss of parts of that pattern through the effects of medieval agriculture, and it was eventually redressed by research on the environmental history of the Kennet valley (Evans *et al.* 1993).

The work was not published in detail until recently, and that is how time could play its tricks (Fowler 2000). Before the report on this project was finished, the ceramic chronology of the first millennium BC had been revised (Barrett 1980). Our understanding of hillforts had changed too, so that it became more difficult to

argue that they were the power centres of a social elite (Hill 1996). They seemed less of a unitary phenomenon and harder to distinguish from the other enclosed sites of the same period. Where the settlement archaeology of the 1970s had stressed their importance in agricultural production, now it seemed as if even these places were caught up in a variety of ritual practices that had hardly been considered before (Hill 1995).

The results of research on Fyfield and Overton Downs appeared in an intellectual climate quite different from the one in which that project had been conceived. A single feature stands out more than any other. Here was a campaign of fieldwork with the explicit aim of shedding light on the organisation and functioning of a typical Iron Age landscape, but now it seems as if most of the earthworks that it had set out to investigate were of Middle and Late Bronze Age origin (Fowler 2000, chapter 15; Gingell 1992). The Iron Age settlements had little connection with them. On Overton Down itself, Iron Age houses were built within the outlines of an existing Bronze Age field: part of a larger system extending across the chalkland. This site was briefly contained by an earthwork and the surrounding area was ploughed, but by the Middle Iron Age – the likely date of the nearby hillfort – there is no evidence that this field system was still in use (Fowler 2000, 82–92). This upset is of more than local significance, for one effect of the increase in commercial fieldwork during the last decade has been to suggest that in lowland England regular field systems of the kind that were once referred to as ‘Celtic’ were mainly a Bronze Age phenomenon. They were not a major feature of Iron Age agriculture, although new forms of land organisation were established late in that period and increased in importance after the Roman conquest (Fulford 1992). We shall not be considering the later fields in any detail here.

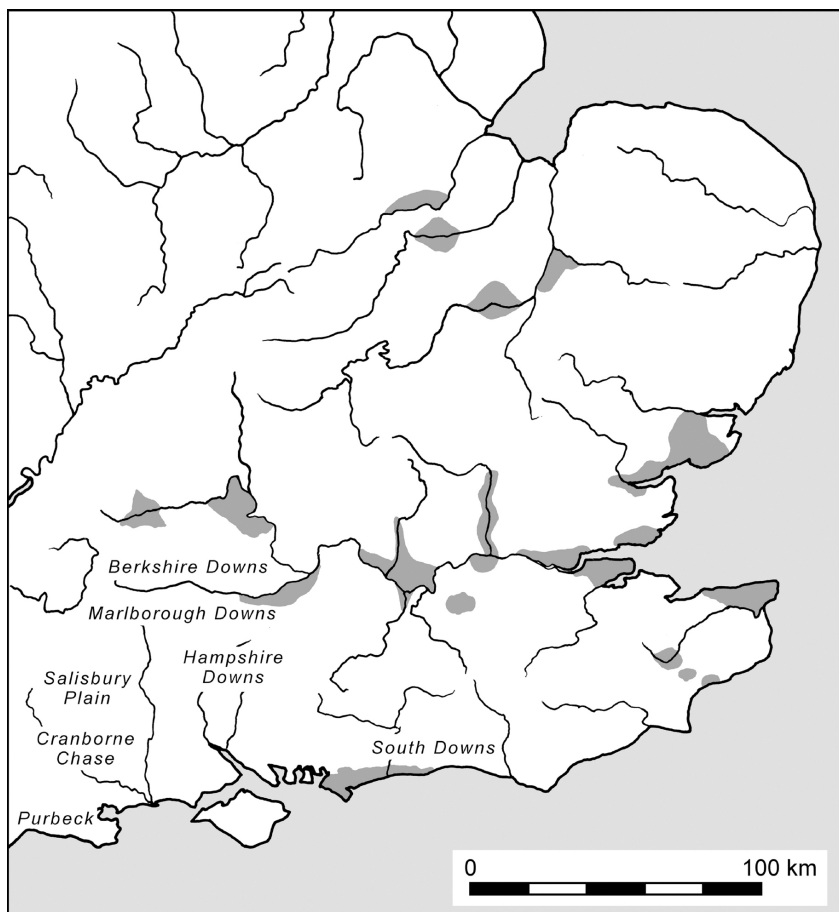


Fig. 1. The main areas of lowland England with Bronze Age field systems. Excavated field systems are shaded. Regions with important earthwork evidence are indicated in italics.

In the first part of this paper, David Yates discusses the evidence for Bronze Age field systems revealed by contract archaeology. Richard Bradley follows this account with a discussion of Iron Age patterns of land use. Both studies focus on southern England and the Midlands where most projects have taken place. It is too soon to be sure that the same sequence will be found in other areas. The main source of evidence is provided by the excavations of the last twenty years, few of which have been published. We must thank those who carried out this work for making their results available to us.

The Later Bronze Age (DY)

The distribution of the first series of 'Celtic' field systems may actually be quite restricted; later systems cover a wider area (Yates 1999; 2001). When we combine the distribution of surviving earthworks with the results of recent excavations, it becomes clear that most of the earlier examples are found in a compact area extending along the North Sea coast from Kent to the border between Cambridgeshire and Lincolnshire, and along the English Channel as far west as Devon and Cornwall (Fig. 1). Although there are other isolated examples, they do not extend much further north than the Cotswolds and the Chilterns. Since 'Celtic' fields were long thought of as a feature of the chalk, it is particularly interesting that they were not identified in recent surveys of the Yorkshire or Lincolnshire Wolds (Stoertz 1997; Boutwood 1998).

Not only are they largely confined to southern England and especially the South-East, their occurrence is also restricted to particular parts of this area. This is less true of the earthwork sites than it is of the lowland field systems discovered in excavation. These are commonly found on the coast, along estuaries or beside major rivers and their tributaries. Some of these regions seem to have been used so intensively that Bronze Age land divisions extend into adjacent areas with heavier, less productive soils.

One of the key areas defined by recent fieldwork was the Thames (Yates 1999). Land divisions are found on either side of the Thames estuary. There were co-axial land divisions at Gravesend and Mucking in Essex, and more examples where the river narrowed. Further upstream, groups of fields can be found at its confluence with major tributaries, for example the lower Kennet at Reading (Berkshire). Other important groups of fields occur away from the Thames itself, for example in the Medway and Great Ouse valleys in Kent. They are also found on the River Wandle at Carshalton in Surrey and on the River Lea at Enfield in Greater London. These were on major routes, communicating with the North Downs and East Anglia respectively, and each is located in an area that has produced a significant number of metal finds.

The Fenland was also important at this time, although it is clear that the field systems are associated with the lower reaches of major rivers rather than the wetland itself (Evans and Knight 2000).

Concentrations of co-axial fields, droveways and enclosures can be found where the Welland, Nene, Great Ouse, Cam, Lark and Little Ouse rivers discharge into the fens. Similarly, coastal farming settlements have been discovered during excavations on the fertile loess of the Sussex coastal plain, another region that was already well known for its deposits of metalwork. In the same way, there are enclosure systems and formal land blocks along the North Sea coast.

It seems as though pressure on fertile soils was intense. For example, on the river terraces west of London almost all the available land seems to have been appropriated. In addition, land divisions spill over onto alluvial deposits, and are found in areas of brickearth and even on gravel islands within the floodplain of the River Colne. Indeed, there is one instance in which flood defences were constructed to safeguard an area of farmland.

It is more difficult to discuss the distribution of earthwork field systems, as these cannot be dated in the absence of excavation. Rather similar land divisions were certainly being created during the Later Bronze Age and again in the Late Iron Age and Roman periods, but they cannot always be distinguished from one another on morphological grounds. On the other hand, some field blocks are directly associated with dated settlements and others are cut by linear ditches which are known to date from the Bronze and Iron Ages. The main regions to provide such evidence are indicated in [Figure 1](#). The most convincing evidence of Later Bronze Age field systems comes from the Marlborough Downs (Gingell 1992), Salisbury Plain (McOmish *et al.* 2002), Cranborne Chase (Bowen 1991) and the South Downs (Rudling 2002), although there are indications of a similar pattern in other areas. In only two cases, the South Downs and the Berkshire Downs, are these groups of ‘Celtic’ fields near to the lowland systems revealed by excavation and in neither case is the upland evidence known in sufficient detail for us to pursue detailed comparisons between them. Even so, there is little to suggest that the chalkland systems were laid out before the Middle Bronze Age. Some of these systems had been abandoned when individual enclosures or boundary ditches cut across them. A number of those earthworks date from the Middle Bronze Age, whilst others can be assigned to the Late Bronze Age and/or Early

Iron Age (Bradley *et al.* 1994; Cunliffe 2000).

The dating evidence from lowland field systems is broadly similar. In certain cases it seems as if Middle Bronze Age field systems went out of use in the Late Bronze Age and that some of the Late Bronze Age systems were established in different positions from their predecessors, but there is little evidence that they were used or maintained far into the Early Iron Age (Yates 1999; 2001). Many of the associated settlements seem to have gone out of use, although they were sometimes relocated nearby. More important, there is little to suggest that similar land divisions were newly established during the Early Iron Age. In lowland England, the creation of 'Celtic' field systems may have lapsed for several hundred years.

That is the broad outline, but it has to be qualified in several ways. It is difficult to date ditches which were frequently re-cut, and there are regions in which the ceramic chronology will not allow any sharp divisions to be made (Barnett 2000). Nor is there anything to preclude fossil field systems remaining in use when new ones were no longer created. The latter occurred at Overton Down, but in that case the relationship is clearly documented by stratigraphic evidence (Fowler 2000, 82–92). It is more usual for the occupied area to shift between the Bronze Age and Iron Age, so that on any reckoning it is hard to envisage much use of relict fields taking place after that time. Where new field systems were established during the Late Iron Age they rarely took much account of their predecessors.

If the lowland field systems were contemporary with those on the chalk, were they used in similar ways? There was certainly one important distinction, for the lowland land divisions survive as ditches, occasionally supplemented by fences, whilst the classic groups of 'Celtic' fields on the downland are defined by groups of lynchets (Fowler 1983, 94–119). They formed as a result of soil erosion, but it seems as if the individual plots had been bounded in a different way, for ditches are rarely found. Moreover the extent of soil erosion seems to be largely a result of cultivation. The enormous quantities of artefacts found within these deposits – and also in the layers of hillwash that accumulated on valley floors – suggest that these fields were maintained by regular manuring (Bell

1983; Rudling 2002, 203–38; 249–51). This would not have been sufficient in itself and land must also have been left fallow and used for pasturing animals.

The lowland field systems may also have been associated with mixed farming, but here there could have been a greater emphasis on animals. The lowland landscapes often contain the same elements: fields and enclosures integrated with droveways, and numerous water holes (Yates 1999). It seems as if livestock may have been central to economic prosperity. These water holes not only provide environmental evidence indicating the presence of grazing land, they often contain special deposits including metalwork, animal bones, human remains and token cremations. There are good examples at Radley, Oxfordshire, and Perry Oaks in West London (Mudd 1995, 30; Barrett *et al.* 2001). Such features seem to have been refilled rapidly before they were formally sealed over, and in some respects these features may have had the same symbolic significance as did storage pits in the Iron Age. Small deposits of cremated bone could also be found within the fields (Brück 1995; Guttman and Last 2000, 354–6) and there are sites where burnt mounds have been found beyond the limits of the enclosed land (Brossler 2001). The same applies to metal hoards (Dunkin 2001). Similar elements may have been present among the field systems on the chalk but excavation has usually been on too limited a scale for this to be clearly demonstrated.

In one respect these two kinds of field system share an important characteristic. Recent work on Salisbury Plain has suggested that the Bronze Age fields in that area may have shared a dominant axis, extending from north-east to south-west (McOmish *et al.* 2002, 54–5; 153). This takes no account of the prevailing topography and, although it may have been influenced by the position of the sun, there are cases in which large areas of arable land may have remained in shadow. The same observation can be made in other parts of the chalk, including the Marlborough Downs. The ditched field systems revealed by excavation share a similar alignment. Like their upland counterparts, they also show a subsidiary axis from north-west to south-east which matches the orientations of some of the houses in the associated settlements.

On a broader level there is a contrast between the two kinds of

Bronze Age field system. The great majority of the organised landscapes in lowland areas are found near to major deposits of metalwork, most of them in rivers (Yates 1999; 2001). They are also associated with the distinctive enclosures known as ringworks, which date from the same period (Needham and Ambers 1994; Guttman and Last 2000, 351–3). There is even some evidence for the production of fine metalwork on these sites. In each case it seems possible that surplus production was directed towards a programme of conspicuous consumption: an idea first advanced by Rowlands (1980) over twenty years ago. In the same paper Rowlands suggested that the chalk uplands may have played a subsidiary role in the same system. It is certainly true that the settlements along the coast and rivers were better placed to participate in long distance exchange. This would have made them vulnerable when social networks changed as the Bronze Age came to an end, and it was at that time that most of the field systems seem to have been abandoned.

The Iron Age (RB)

Given the wide distribution of these different features, the interruption in the creation of field systems is something of a surprise, especially as it is the Middle Iron Age that provides some of the most convincing evidence of intensive mixed farming. This comes from environmental archaeology and from the excavation of numerous settlement sites (Cunliffe 1991, chapter 15). There is even a body of evidence to suggest that fertility and food production had become vital concerns in the ritual life of this period (Hill 1995). This is not simply a question of chronology, for there is considerable evidence of Later Bronze Age settlements in regions like the West Midlands where field systems never seem to have developed. The change was far more radical.

Obviously, prehistoric farming did not always depend on boundaries that can be recovered today. This applies to parts of the Later Bronze Age landscape and certainly to much of the Iron Age. Again there is a need for caution, for there is evidence of hedge plants from the excavation of Iron Age sites (Pollard 1996, 108), but these are also found in association with the ditched land divisions of the Bronze Age. Indeed, it has been argued that low banks would

have to be built for mature hedges to become well established (Pryor 1998, 87); it may be that some divisions were intended to last longer than others. At all events it is quite clear that by the Middle Iron Age, and most probably before, people no longer invested so much labour in defining the limits of individual plots of farmland. Far from providing evidence of agricultural intensification, the field systems disappeared from view as prehistoric farming increased its impact on the environment.

It is worth considering this point from a quite different geographical perspective. 'Celtic' fields had been identified in Britain by the beginning of the twentieth century, and the field surveys carried out by Crawford and the Curwens were a source of inspiration to scholars working on the Continent, who began to identify related earthworks in their own countries. One of the first people to explore this evidence was Hatt (1949), but now the distribution of these earthworks has spread from his original study area in Denmark, to southern Sweden, Bornholm, Gotland, the Netherlands, North Germany, and Belgium (Müller-Wille 1965; Brongers 1976; Carlsson 1979; Widgren 1983; Nielsen 1984). It even seems to cross the Baltic into Estonia (Lang 1994).

At first it seemed reasonable to infer that these field systems would be of similar age to those in Britain, and early work appeared to confirm this impression, for they were often associated with Iron Age settlements. A number of field boundaries – and occasionally whole arable plots – have been investigated by excavation and these have provided radiocarbon dates as well as environmental evidence (Lindquist 1974; Carlsson 1979; Nielsen 1984; 1986). Some systems seem to overlie older settlements and others are buried beneath features of later periods. Again their chronology has changed as a result of recent work and, like their counterparts in England, it now seems that they originated during the Middle and Late Bronze Ages (Fokkens 1998, 119–21). Their demise is much harder to document but appears to have taken place on individual sites as late as the Roman Iron Age (*ibid.*). That means that the main periods of use of 'Celtic' fields on either side of the North Sea were not the same. Northern European examples first appeared in parallel with their British equivalents but they remained important when the latter went out of use. New systems may even have been created in

Britain as their continental counterparts were superseded.

In northern Europe there were some changes in the character of land use during the Later Bronze Age (Widgren 1999). There seems to have been a growing concern to prevent soil erosion, and this may have been one factor behind the creation of a network of earthwork boundaries in areas of established cultivation. There may also have been some changes to arrangements for manuring ploughland, but settlement was still quite dispersed, with a network of longhouses which seem to have been relocated every generation (Gerritsen 1999). The major development came late in the Iron Age and in some areas after the first contacts with the Roman world when what have been called 'wandering settlements' were replaced by a new kind of land organisation. Now houses were regularly rebuilt on the same sites and nucleated settlements became increasingly common. Some of these groups of houses were enclosed and may provide evidence of status divisions. The same processes saw the demise of 'Celtic' fields as the population adopted a more systematic way of organising food production based on the distinction between an intensively worked infield and a more distant outfield. In some cases this is marked on the ground by a network of longer boundaries superimposed on the remains of earlier land divisions (Lindquist 1974). In short, the intensification of land use in northern Europe may have led to the abandonment of the 'Celtic' fields.

Is there a lesson to learn from that comparison? Could something rather similar have happened in Britain during an earlier phase? We must consider what took the place of 'Celtic' fields in southern England. Perhaps the clearest evidence is for the creation of new kinds of land boundaries and the enclosure of more extensive areas of farmland. This could take two forms, both of which leave clear traces in the subsoil. These were pit alignments and linear ditches.

Too much attention has probably been paid to the linear ditches of the chalkland, which may represent only the earliest and best-preserved examples of a long-running practice of enclosing large areas of land (Chadwick 1999). Those in Wessex originated in the Later Bronze Age and sometimes replaced groups of 'Celtic' fields (Bradley *et al.* 1994; Cunliffe 2000), whilst their counterparts on the Yorkshire Wolds are found in a landscape where such field systems

have not been identified (Stoertz 1997). In any case they seem to have maintained their significance over a longer period and played a pivotal role in the organisation of Iron Age settlements and cemeteries. Further groups of linear boundaries have been investigated in Lincolnshire and, although the evidence is limited, again they seem to have been used between the Later Bronze Age and the Middle or Late Iron Age (Boutwood 1998).

In fact there are many areas in which there was a dislocation between the Bronze Age and Iron Age patterns of occupation, so that their features do not necessarily coincide. The main density of boundary systems characterised by linear ditches and pit alignments complements the distribution of the older fields. The later boundaries are generally found further to the north and west than the co-axial land divisions of the Bronze Age and sometimes in areas that were being extensively settled for the first time. Where that was not the case, the new pattern seems to have been superimposed on a distribution of Late Bronze Age open sites rather than the enclosed landscapes that characterise the English Channel and North Sea coasts. [Figure 2](#) illustrates the distribution of pit alignments in our study area. These have been selected, rather than linear ditches, because they are easier to identify on aerial photographs.

Again there are serious problems of chronological resolution (Wilson 1978; Pollard 1996; Waddington 1998). Such boundary systems are rarely associated with any quantity of artefacts, and many of the excavated examples are in regions which lack a distinctive ceramic sequence. As a result, individual estimates for the age of these boundaries extend between the end of the Bronze Age and the middle of the Iron Age. Those are very broad limits, but to some extent we can compensate for this by considering the settlements found among them.

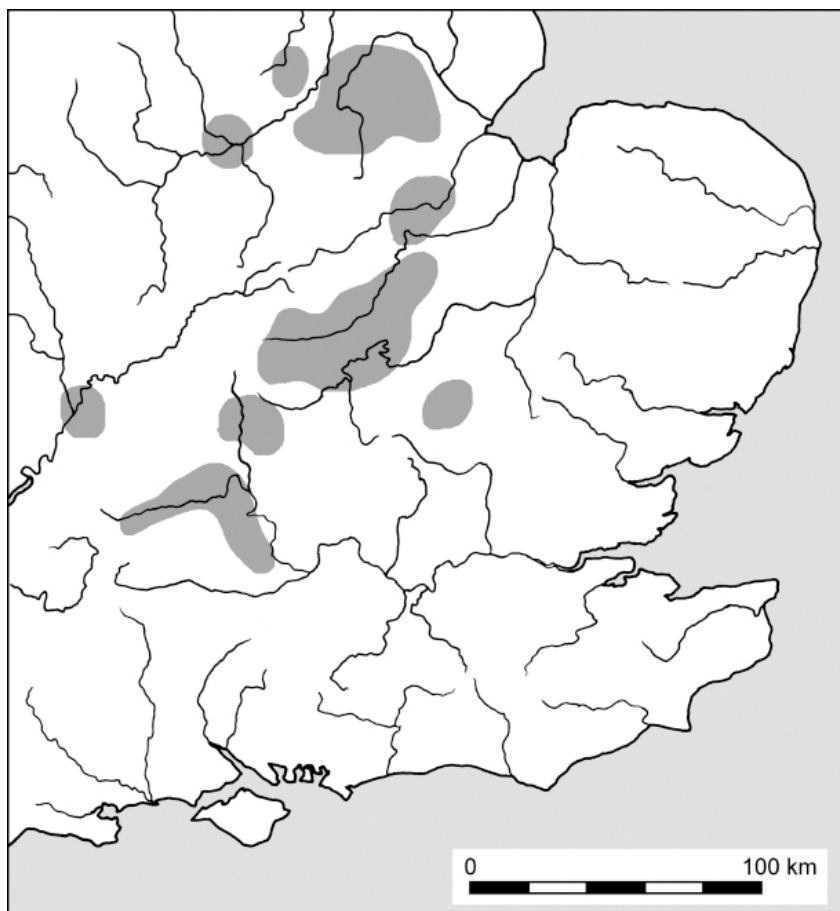


Fig. 2. The main areas of lowland England with pit alignments, based on information supplied by the National Monuments Record.

There is no single pattern. In some areas the newly created boundaries mark the limits of open sites, like that at Salford in the Great Ouse valley (Dawson 2000a, fig. 10.5), and in others they abut a series of domestic enclosures. A good example is at Longstock in Hampshire (Cunliffe and Poole 2000, fig. 4.8b). Often there is evidence for a sequence leading from one settlement type to another – and back again (Taylor 1997). Individual land units might contain one or more foci of this kind. There is evidence of regional and even quite local variation, but what is clear is that the boundaries themselves were respected and reinforced over considerable periods of time. They seem to have enclosed

appreciable tracts of land, at least as large as the co-axial field systems that had been created in the Bronze Age. The ditches and pit alignments seem to have marked the limits of zones of productive land and there is no reason to doubt that the resources contained within them could have sustained entire communities. As so often in the Iron Age, it is rare for the settlements associated with these land divisions to show any marked distinctions of function or wealth.

We have already referred to the paradoxical situation, that it was in the Middle Iron Age – the very period in which ‘Celtic’ fields may have been redundant – that the use of southern English hillforts reached its zenith. That is significant because the use of such sites seems to have been so closely integrated into the agricultural cycle. Not only were some hillforts provided with extensive facilities for grain storage, but their use seems to have been attended by rituals that focused on the process of crop production (Hill 1995; 1996). The most obvious of these was the use of abandoned storage pits for the reception of human bodies, animal remains and a carefully selected range of artefacts. Recent work has been far more successful in showing that hillforts were employed for a variety of rituals than it has in working out who lived there. It is hard to justify the argument that hillforts were inhabited by a social elite. Indeed, the strikingly uniform character of the houses found within the defended sites of the Middle Iron Age may result from a deliberate attempt to discourage, or even suppress, differences of status among the occupants.

Hillforts are not found across the entire distribution of the newly created land units, and it is uncertain whether those that do occur there necessarily had the same character as the extensively excavated examples, which tend to be in central southern England. Even so, it is worth recalling how interpretations of these monuments have changed. This is not just a question of investigating their involvement in food production or the rituals associated with the fertility of the land. No one would deny that the larger sites must have been the product of corporate labour and that they required the co-ordinated efforts of a large number of people. The difficulty is in demonstrating that the activities that took place there were different in kind from those happening elsewhere in the

landscape. There is little to sustain the argument that the defended enclosures were the power bases of a ruling elite. It may be more appropriate to compare them with the assembly sites of the early Middle Ages where communal business was conducted and where political decisions were made (Ault 1960).

If that is a more promising avenue to pursue, it might suggest that the basic unit of earlier Iron Age society was the community rather than a social elite of the kind that is often postulated on the basis of literary evidence. One possible model is provided by Caesar in his account of the Germans, although we do not suggest that it should be extended uncritically to Britain. In that case, land was controlled by the community, and the local leaders, whom he called 'magistrates', reallocated resources on an annual basis (*De Bello Gallico* IV, 1; VI, 22). There was no need to subdivide the agricultural land and we can infer that grain was also distributed communally. This was one way of reducing social differences based on the production of surplus and, whatever the day to day politics that affected the operation of this system, it seems to have resulted in an ethic of equality that took some time to break down (Thompson 1965).

This is not an entirely new idea, as J.D. Hill has drawn attention to the Germanic Mode of Production in his analysis of Wessex hillforts (1996, 104). Caesar's description is not intended as a simple analogy for Middle Iron Age settlement anywhere in lowland England, nor is it clear quite how his account would integrate with the archaeological evidence in northern Europe. What is useful is that it treats the communal assembly as the unit of decision-making in the exploitation of the land. That is surely more consistent with current interpretations of hillforts than a hierarchical model developed from the literature of early medieval Ireland.

A greater emphasis on the community as the unit of political action might account for many features of Iron Age archaeology in southern England. It could explain the rapid development of enclosed settlements which seems to run in parallel with the disuse of 'Celtic' fields (Thomas 1997). It may account for the creation of larger land blocks that can contain one or more settlements, but lack clear subdivisions. There is evidence for increasingly intensive agriculture across many parts of lowland England during the Middle

Iron Age, and hillforts became involved in the distribution of agricultural produce and in rituals that seem to have been associated with the fertility of the land. If those hillforts were built and used on a communal level – and not by a restricted elite – then their integration into the workings of the prehistoric landscape become easier to comprehend.

All this is very different from the settlement pattern of the Later Bronze Age, where the main areas of enclosed land seem to be in the regions with ringwork enclosures and lavish deposits of metalwork. It also contrasts with the landscape of the Late Iron Age in which we can identify the differences of status and wealth that elude us in earlier parts of this period. By this stage individual control over land may have assumed greater significance and it is then that regular field systems were re-established. Not surprisingly, some of them were maintained throughout the Roman period. Here we have been concerned with what happened in between these two phases of highly visible activity and, as in all things Iron Age, the excavated data are abundant but difficult to interpret.

Time plays strange tricks on archaeologists, and odd alignments are created as chronologies are changed. This seems to have happened after co-axial field systems went out of use. Having spent so much effort asking what we mean by Celts, it may be time to look at ‘Celtic’ fields.

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Bibliography

- Ault, W. 1960. *Village Assemblies in Medieval England*. Louvain: Louvain University Press.
- Barnett, S. 2000. Luminescence dating of pottery from later prehistoric Britain, *Archaeometry* 42, 431–457.
- Barrett, J. 1980. The pottery of the later Bronze Age in lowland England, *Proceedings of the Prehistoric Society* 46, 297–319.
- Barrett, J., Lewis, J. and Welsh, K. 2001. Perry Oaks – a history of inhabitation, part 2, *London Archaeologist* 9 (8), 221–227.
- Bell, M. 1983. Valley sediments as evidence of prehistoric land use on the South Downs, *Proceedings of the Prehistoric Society* 49, 119–150.
- Boutwood, Y. 1998. Prehistoric land boundaries in Lincolnshire and its fringes, in R. Bewley (ed.), *Lincolnshire's Archaeology from the Air*, 29–46. Lincoln: Society for Lincolnshire Archaeology and History.
- Bowen, H.C. 1991. *The Archaeology of Bokerley Dyke*. London: HMSO.
- Bradley, R., Entwistle, R. and Raymond, F. 1994. *Prehistoric Land Divisions on Salisbury Plain*. London: English Heritage.
- Brongers, J. 1976. *Air Photography and Celtic Field Research in the Netherlands*. Amersfoort: Nederlandse Oudheden 6.
- Brossler, A. 2001. Reading Business Park: the results of phases 1 and 2, in Brück 2001, 129–138.
- Brück, J. 1995. A place for the dead: the role of human remains in late Bronze Age Britain, *Proceedings of the Prehistoric Society* 61, 245–278.

- Brück, J. (ed.) 2001. *Bronze Age Landscapes: Tradition and Transformation*. Oxford: Oxbow Books.
- Carlsson, D. 1979. *Kulturlandskapets utveckling på Gotland*. Visby: Stockholms universitet kulturgeografiska institutionen.
- Chadwick, A. 1999. Digging ditches but missing riches? Ways into the Iron Age and Romano-British landscapes of the north Midlands, in B. Bevan (ed.), *Northern Exposure: Interpretative Devolution and the Iron Ages in Britain*, 149–171. Leicester: Leicester Archaeology Monograph 4.
- Cunliffe, B. 1991. *Iron Age Communities in Britain* (3rd edn). London: Routledge.
- Cunliffe, B. 2000. *The Danebury Environs Programme. The Prehistory of a Wessex Landscape, Vol. 1. Introduction*. Oxford: Oxford University Committee for Archaeology Monograph 48.
- Cunliffe, B. and Poole, C. 2000. *The Danebury Environs Programme, Vol. 2, part 4. New Buildings and Fiveways, Longstock*. Oxford: Oxford University Committee for Archaeology Monograph 49.
- Dawson, M. 2000a. The Iron Age and Romano-British period: a landscape in transition, in Dawson 2000b, 107–130.
- Dawson, M. (ed.) 2000b. *Prehistoric, Roman and Post-Roman Landscapes in the Great Ouse Valley*. York: Council for British Archaeology Research Report 119.
- Dunkin, D. 2001. Metalwork, burnt mounds and settlement on the West Sussex coastal plain: a contextual study, *Antiquity* 75, 261–262.
- Evans, C. and Knight, M. 2000. A fenland delta: later prehistoric land-use in the lower Ouse Reaches, in Dawson 2000b, 87–106.
- Evans, J.G., Limbrey, S., Máté, I. and Mount, R.R. 1993. An environmental history of the upper Kennet valley, Wiltshire, for the last 10,000 years, *Proceedings of the Prehistoric Society* 59, 139–195.
- Fokkens, H. 1998. *Drowned Landscape: the Occupation of the Western Part of the Frisian-Drentian Plateau, 4400 BC–AD 500*. Amersfoort: ROB.
- Fowler, P.J. 1983. *The Farming of Prehistoric Britain*. Cambridge: Cambridge University Press.
- Fowler, P.J. 2000. *Landscape Plotted and Pieced: Landscape History and Local Archaeology in Fyfield and Overton, Wiltshire*. London: Society of Antiquaries.
- Fulford, M. 1992. Iron Age to Roman: a period of radical change on the gravels, in M. Fulford and E. Nichols (eds), *Developing Landscapes of Lowland Britain*, 22–39. London: Society of Antiquaries.
- Gerritsen, F. 1999. To build or to abandon? The cultural biography of late prehistoric houses and farmsteads in the southern Netherlands, *Archaeological Dialogues* 6 (2), 78–114.

- Gingell, C. 1992. *The Marlborough Downs: a Late Bronze Age Landscape and its Origins*. Devizes: Wiltshire Archaeological and Natural History Society Monograph 1.
- Guttmann, E. and Last, J. 2000. A late Bronze Age landscape at South Hornchurch, Essex, *Proceedings of the Prehistoric Society* 66, 319–359.
- Hatt, G. 1949. *Oldtidsagre*. Copenhagen: I Kommission hos Munksgaard.
- Hill, J.D. 1995. *Ritual and Rubbish in the Iron Age of Wessex*. Oxford: British Archaeological Reports British Series 242.
- Hill, J.D. 1996. Hill-forts of the Iron Age in Wessex, in T.C. Champion and J.R. Collis (eds), *The Iron Age in Britain and Ireland: Recent Trends*, 95–116. Sheffield: J.R. Collis Publications.
- Lang, V. 1994. Celtic and Baltic Fields in north Estonia: fossil field systems of the late Bronze Age and early Iron Age at Saha-loo and Proosa, *Acta Archaeologica* 65, 203–219.
- Lindquist, S.-O. 1974. The development of the agrarian landscape on Gotland during the early Iron Age, *Norwegian Archaeological Review* 7, 6–32.
- McOmish, D., Field, D. and Brown, G. 2002. *The Field Archaeology of the Salisbury Plain Training Area*. Swindon: English Heritage.
- Mudd, A. 1995. The excavation of a Late Bronze Age/Early Iron Age site at Eight Acre Field, Radley, *Oxoniensia* 60, 21–65.
- Müller-Wille, M. 1965. *Eisenzeitliche Fluren in den festlandischen Nordseegebieten*. Münster: Selbstverlag der Geographische Kommission.
- Needham, S. and Ambers, J. 1994. Redating Rams Hill and reconsidering Bronze Age enclosures, *Proceedings of the Prehistoric Society* 60, 225–243.
- Nielsen, V. 1984. Prehistoric field boundaries in eastern Denmark, *Journal of Danish Archaeology* 3, 135–162.
- Nielsen, V. 1986. Ploughing in the Iron Age. Plough marks at Store Vildemose, North Jutland, *Journal of Danish Archaeology* 5, 189–208.
- Pollard, J. 1996. Iron Age riverside pit alignments at St Ives, Cambridgeshire, *Proceedings of the Prehistoric Society* 62, 93–115.
- Pryor, F. 1998. *Farmers in Prehistoric Britain*. Stroud: Tempus.
- Reynolds, P. 1979. *Iron Age Farm*. London: British Museum Publications.
- Rowlands, M. 1980. Kinship, alliance and exchange in the European Bronze Age, in J. Barrett and R. Bradley (eds), *Settlement and Society in the British Later Bronze Age*, 15–59. Oxford: British Archaeological Reports British Series 83.
- Rudling, D. (ed.) 2002. *Downland Settlement and Land-Use. The Archaeology of the Brighton Bypass*. London: Archetype Publications.
- Stoertz, C. 1997. *Ancient Landscapes of the Yorkshire Wolds*. Swindon: RCHME.

- Taylor, J. 1997. Space and place: some thoughts on Iron Age and Romano-British landscapes, in A. Gwilt and C. Haselgrove (eds), *Reconstructing Iron Age Societies*, 192–204. Oxford: Oxbow Monograph 71.
- Thomas, R. 1997. Land, kinship relations and the rise of enclosed settlements in first millennium BC Britain, *Oxford Journal of Archaeology* 16, 211–218.
- Thompson, E.A. 1965. *The Early Germans*. Oxford: Clarendon Press.
- Waddington, C. 1998. A review of pit alignments and a tentative reinterpretation of the Milfield complex, *Durham Archaeological Journal* 13, 21–33.
- Widgren, M. 1983. *Settlement and Farming Systems in the Early Iron Age*. Stockholm: Almqvist and Wiksell.
- Widgren, M. 1999. Reflections on landscape and settlement transformation, in C. Fabech and J. Ringtved (eds), *Settlement and Landscape (Proceedings of a Conference in Århus, Denmark, May 1998)*, 31–33. Moesgård: Jutland Archaeological Society.
- Wilson, D.R. 1978. Pit alignments: function and distribution, in H.C. Bowen and P. Fowler (eds), *Early Land Allotment in the British Isles*, 3–5. Oxford: British Archaeological Reports British Series 48.
- Yates, D. 1999. Bronze Age field systems in the Thames Valley, *Oxford Journal of Archaeology* 18, 157–170.
- Yates, D. 2001. Bronze Age agricultural intensification in the Thames valley and estuary, in Brück 2001, 65–82.

Refiguring rights in the Early Iron Age landscapes of East Yorkshire

Melanie Giles

Introduction

This paper begins by highlighting the key problem of interpretation relating to the Early Iron Age in East Yorkshire: indigenous or invasionary models of cultural change? By showing how this question fosters particular understandings of three key concepts (identity, practice, and time), this paper argues that it should be abandoned in favour of an archaeological project that seeks to explore the historical conditions of people's lives. This allows us to explore how they enabled and constrained certain kinds of identity: particular possibilities of social being. Using analogies drawn from communities with a strong pastoral element, my paper explores the landscape context of the linear earthworks of the Yorkshire Wolds and their relationship with funerary activity during the period from the seventh to third centuries BC. This analysis reveals long-term transformations in people's relationships with place, in which the dead become an increasingly important resource, revealing the historical context in which the square barrow burial rite (attributed to the 'Arras culture') arises. In conclusion, I will suggest that the most compelling problem archaeologists actually face is the interpretation of the material effects of social projects: how we animate the past in our accounts.

Conceptions of origins and identity in Iron Age East Yorkshire

In the spring of 2001, a new cart burial was discovered by the Guildhouse Consultancy, whilst they were working on the medieval

manor at Wetwang Slack. Although a square barrow cemetery with three outlying cart burials was known from the opposite side of the valley (Dent 1982; 1984a–c; 1985), this burial appeared unique in both its landscape location and the material found within the grave. A two-link horse bit inlaid with glass enamel suggested that it may date from the late fourth or early third century BC (Hill 2002).¹ An item of further interest was an iron mirror, possibly decorated with a tassel strung with miniature blue glass beads. Even the woman buried with the cart appears to have been marked by an unusual physiognomy. However, the question that particularly preoccupied the local press was the nature of the relationship between this woman and the later prehistoric communities of the Champagne region who also buried their dead under square barrows (Stead 1965). Put crudely, they were interested in knowing if she was French!

This question has obsessed antiquarians and archaeologists working in East Yorkshire for almost two centuries. Social evolutionism dominated the understanding of early archaeologists such as Mortimer and Greenwell. This paradigm suggested that past societies evolved progressively, like other organisms, and could be identified according to taxonomic principles, supported by ethnographic analogy with ‘primitive’ societies (Tylor 1871; Evans 1872; 1881). As Fabian (1983) has pointed out, this analogy rested upon a ‘denial of coevalness’ which was logically flawed. However, the implication of the model was that *rapid* cultural change could only result from the influence of external stimuli, such as the invasion of a new population. Paradoxically, the history of the British Isles became one of cultural invasion, epitomised by the ‘Arras culture’ of the square barrow cemeteries:

‘The presence of the chariot with its artistic accomplishments could seem to point to a somewhat sudden introduction of a higher state of civilisation, as we do not find in any of the barrows indications of a gradual development of the arts.’
(Mortimer 1905, lxxv)

Mortimer’s interpretation was supported by craniological analysis undertaken by Thurnham and Davis on Iron Age burials from Driffield excavated by the York Literary and Philosophical Society,

and published as part of *Crania Britannica* (Thurnham and Davis 1865), and other burials analysed by Rolleston (in Greenwell 1877) and Wright (in Greenwell 1906). The latter specialist concluded that the 'race' indicated by skull form indeed represented 'a fresh immigration from the Continent ... living in a tribal fashion' (Wright in Greenwell 1906, 314; 323). Greenwell also noted the opinion of Augustus Lane Fox (later Pitt-Rivers), whose excavations at Danes Dyke, Flamborough Head, and broader study of the later prehistoric linear earthworks of the region suggested that they were defensive works raised by 'a body of men advancing from the East, and gradually entrenching themselves as they extended their progress towards the West' (paraphrased in Greenwell 1887, 124).

The peculiar character of East Yorkshire's Iron Age continued to puzzle archaeologists working within very different paradigms. The 'Arras La Tène culture' remains isolated from the Woodbury group in Hodson's diagram of Iron Age cultures, spanning the 'insular' and 'continental' types (Hodson 1964, fig. 1). The Arras culture also remains the exception in Clark's model of an Iron Age otherwise characterised by its 'cultural archaism':

'The invaders with La Tène culture *for which a reasoned case has been made* ... were the offspring of the Parisi who introduced the Arras culture to East Yorkshire.' (Clark 1966, 186; my emphasis).

Clark also proposed a series of scenarios to explain this continental affinity. It could have been brought about by 'an intrusive aristocracy who for some centuries at least lorded it over a native element', or else the material affinities might be the product of a more diffusionist process: a 'highly complex web of trade connections' (*ibid.*, 186). Ian Stead's methodical study of the burial rite as a whole led him to believe that the rite was actually executed in a distinctly local manner (1979). It might therefore have been introduced by 'adventurers, mercenaries ... or a few farmers' (*ibid.*, 93) or even – in a model aping Childe's megalithic missionaries – 'a well-connected evangelist' (1991, 184).

The tension between these models of indigenous continuity or cultural invasion epitomises the crisis faced by Iron Age studies over the last twenty years. British archaeologists have been accused of ethnic cleansing in their attempts to criticise the notion that

distinctive material assemblages can be read as the signature of 'Celtic' cultural or ethnic groups (Megaw and Megaw 1996, 180; cf. Collis 1996; James 1999). Meanwhile, European archaeologists regard narratives of indigenous continuity with suspicion; they have their origin in post-war Britain's antithesis to an 'invasion neurosis' which, according to Clark, detracted from:

'what is of much greater importance: when all is said and done the object of British archaeology is surely to tell us about the lives of people who, generation by generation, *in unbroken succession*, occupied and shaped the culture of the British Isles.' (Clark 1966, 173; my emphasis).

For Härke (1998) amongst others, this reluctance to admit migrations and invasions were part of British prehistory is symptomatic of continuing anti-Europeanism amongst elite academic institutions. Conceptions of origin in the past are therefore very much caught up in the identity politics of the present.

Whilst acknowledging this important point, I want to suggest that the debate, by its nature, can never be satisfactorily resolved. Even if genetic analysis were to demonstrate links between communities in East Yorkshire and the Champagne region, we would be left to debate the meaning and significance of such affinities; the degree to which this represented a section of the community or its totality. We would struggle with models of contact, domination, assimilation or hybridity, still harnessed to a culture historical paradigm. I want instead to suggest that this question is a non-question; that its time has passed. In the following section, this paper will explore how the paradigm of culture history conceives of the relationship between identity, practice and time, through what Ingold has called the 'genealogical' model (2000a, 134). I will reflect on its consequences in the light of the archaeologies it permits us to write. I will then propose an alternative approach to identity, broadly characterised as 'relational', exploring the way in which this changes our analysis and interpretation of the past.

Concepts of identity: the genealogical model

The aforementioned works were written within a paradigm in

which identity was considered to be an innate property: a series of characteristics which were inherited through birth. These were considered to be both physical – hence the use of craniology to distinguish racial type (Morse 1999) – and cultural. The term ‘culture’ was used to capture the expressive totality or ‘complex whole which includes knowledge, belief, art, morals, law, custom, and any other capabilities and habits acquired by man as a member of society’ (Tylor 1871, 1). Childe’s contribution was to describe how we might recognise such totalities in material form:

‘We find certain types of remains – pots, implements, ornaments, burial rites, and house forms – constantly recurring together. Such a complex of associated traits we shall call a ‘cultural group’ or just ‘culture’. We assume that such a complex is the material expression of what today would be called a people.’ (Childe 1929, v–vi)

These statements had two implications. First, they implied that the essential components of what makes us ‘who we are’, are handed on from our progenitors. Identity is therefore conceived as an effect of genealogical inheritance. Secondly, what people ‘did’ was, as Childe implied, an *expression* of identity already fully formed, or the realisation of inherent adaptive potentials, rather than a series of practices through which people explored and gained their sense of self and place.

As Ingold (2000a, 135) argues, once we assume that the distinctive components of personhood are derived through genealogical connection rather than through the social contexts of, for example, work, celebration, nurture, exchange or dispute, we assume that the identity of past peoples is in no way derived from their placement and actions in the world. It is independent of context and relationships. Logically then, although their actions may affect the way in which culture is transmitted from generation to generation, it will not alter the ‘substance’ of identity passed on: the rudimentary aspects of being, by which cultures are differentiated.

At its most extreme, this model gives rise to narratives of inheritance through ‘blood and soil’: identity predetermined by virtue of one’s bloodline and region of birth (Bauman 1992). This convincing and potent narrative has been strengthened by the recent replacement of sanguine metaphors with those of genetics.

Both result in accounts of identity which emphasise appearance, temperament and mentality (Ingold 2000a, 137), linking character with environmental determinism; aspects that are all too familiar from generalised sketches of the passionate, pastoral, war-obsessed ‘Celts’ of northern Britain (Piggott 1958; Chapman 1992; Pittock 2000). The conception of landscape in both versions is also telling: identity is conditioned by virtue of place, rather than through one’s interactions and relationships formed *with* place (cf. Brück and Goodman 1999).

As practice has no active part to play in such models, they are incapable of explaining internal change; Hawkes (1968, 299) in particular, abhorred the idea of an ‘inherent dynamism of economic and social life’. Culture is ‘a corpus of traditional wisdom, handed down as a legacy...which is applied or expressed’ (Ingold 2000a, 137), rather than actually constituted through people’s exploratory engagement with the material world. By definition then, such cultures tended to be homogeneous and homeostatic, preserved through the ‘dead weight’ of conservatism; in consequence, mechanisms of radical or rapid change have to be attributed to external causes. This was perfectly in keeping with Worsaae’s edict that mankind did not possess in itself the ‘form of all future progress’ but that advances in civilisation were brought about by ‘the gradual addition of others who continually supplanted the former’ (Worsaae 1849, 134).

Working within such a paradigm, the task of archaeology was to identify the stage of social evolutionary development represented by distinct cultural traits, as well as the regions they occupied, mapping cultures in both time and space. But time appears in this model as a relative measure of states on the progressive continuum of savagery to civilisation: Fabian’s ‘Typological Time’ (1983, 23). The model wrenches time away from existence, away from events as they may have been meaningfully experienced or understood by people in the past. The outcome was a denial that time could be *constitutive* of social life.

This genealogical model could only result in the kind of social evolutionary and culture historical narratives reviewed above. The impasse reached in the debate of indigenous continuity versus cultural invasion resulted from a failure to reconceptualise the

relationship between identity, practice and time.

Conceptions of identity: a relational approach

In opposition to the above model, a relational approach stresses that identity is not something that one 'is' or 'has', but rather something that one *does*. This is to argue that identity is practice: the making and unmaking of relations, with other people, things, animals and places. It emerges from the desire to be able to go on in life, to belong with others in place and time. Through their life-history, people receive contributions, substances and acts of nurture from others (Battaglia 1990), but they also contribute to the being of others. Identity is therefore the means by which social life is meaningfully reproduced; progenerative exchanges through which people also learn to live in the world.

Identity emerges as a perpetual unfolding of capacities and properties; it derives its significance and meaning relative to the entire field of relations in which it is involved (Ingold 2000a, 142). Identity is an ongoing project, whose qualities and character change according to what one is doing, where and with whom. Identity is also a matter of performance: the repeated expression and enactment of forms, relations and categories into which people are inculcated: Butler's (1993) 'reiterative citation'. During most of people's day-to-day lives, this is simply a matter of knowing 'how to go on' in life. Identity is carried forward through the body's habituated dispositions (Bourdieu 1977), its tacit, practical mastery and implicit feel for what is 'appropriate'. Yet a relational approach stresses that this knowledge is generated *through* the course of people's lived experiences and their improvisation in a series of encounters with others (Ingold 2000a, 145).

There are many occasions in which identity is thrown into a more discursive light. Most obviously, these involve key rites of passage and transformation, in which new aspects of one's identity are revealed and held up to public scrutiny. However, even mundane activities mark out one's competence, abilities and capacities. Slips, mistakes and errors become occasions to question one's identity (Mauss 1979; Heidegger 1962). Social action always involves trust (the precondition of all relations) and risks failure, blunder and misinterpretation (Berggren 2000). People struggle to make

themselves understood and intelligible. Finally, because identity is relational, always acting *in mind of others* and anticipating their response (Strathern 1988), people do not have complete control over their identity. They are subject to the authorship and control of others. Making identity a matter of practice reveals this vulnerability in the moment of performance.

Having proposed that identity can be defined as practices concerning the reproduction of relations, we can see that time is therefore constitutive of identity. The time of immediate experience unfolds unceasingly in people's actions (often referred to as *durée*; Bergson 1910). It is qualitative rather quantitative, experienced as a continuous flow of gestures in the present rather than as time passing. However, these gestures, orientated towards particular tasks, derive their meaning or significance from their position in an entire ensemble of tasks, 'performed in series or in parallel... usually by many people working together' (Ingold 1993, 158).

More broadly then, people are bound into the time of their projects (Heidegger 1962), enabled by particular qualities of identity. The first of these is memory. Through reflection upon past experience and knowledge of the consequences of past actions, people become biographical beings, able to tell stories about themselves through acts of remembering. These are the preconditions for projecting forward a series of desires and designs for the future. This is the second aspect of identity: a futural and anticipatory orientation towards social projects in which it is involved. Logically, this involves orchestration or choreography, to bring about both concussive and successive engagements between people and resources. Such manifold projects therefore stretch beyond the individual in space and time.

Ingold has conceptualised this mutual interlocking or interpenetrating series of rhythms as a 'taskscape' (1993). These are experienced by social actors as the cycles or tempos through which life is continually reproduced (diurnal, seasonal, annual, generational). It is the *long-term* coherences between social actors and material conditions that produce certain kinds of landscapes (the taskscape in its embodied form; Ingold 1993, 162). For Ingold then, landscapes represent 'history congealed' (2000a, 150). Whilst these are open to archaeological analysis and interpretation through

the historically specific material effects of past projects, we recognise that this final form of temporality – the *longue durée* (Braudel 1980) – operates in a sense of time beyond the perception of past agents. It is animated through *our* historical narratives.

Once we take responsibility for our role in the writing of history, it begins radically to alter the paradigms within which we work. It demands that we move away from approaches which argue that a certain *kind* of people created a particular kind of landscape through their distinctive ‘cultural traditions’. Instead, as Barrett (1994) has argued, we should explore how material and social conditions constrained and enabled certain projects of identity: particular ways of ‘being human’ that became historically possible in this later prehistoric landscape.

Characterising the Early Iron Age landscape

The second half of this paper explores this approach in the context of the Yorkshire Wolds during the Early Iron Age (c. seventh to fourth centuries BC). It will focus on the relationship between two phenomena mentioned above, taken as ‘indicators’ of cultural change: linear earthworks and funerary activity, and will explore both as the conditions through which particular scales of social relationship were reproduced with other people and places. I will argue that these were part of long-term historical processes, the consequences of which were to change people’s relationships with the past: to alter ‘ways of being in history’ (Bloch 1996). Due to the lack of detailed survey, excavation and publication of ‘hillforts’, enclosures or ‘defended’ sites, such sites remain poorly understood (Stoertz 1997) and will only be referred to briefly.

The linear earthworks of the Yorkshire Wolds

The linear earthworks of the Yorkshire Wolds have been transcribed and rectified from aerial photographs by Cathy Stoertz, in her seminal study published by the RCHME (1997). Surviving lengths of upstanding banks and ditches, such as the sevenfold series at Huggate Dykes, suggest how impressive these monuments once were. From limited excavation, they appear to date from the Later Bronze Age; Mortimer discovered Wilburton phase bronze-casting mould debris in a pit inserted into the earthwork’s bank at Fimber

(Mortimer 1905; see also Challis and Harding 1975, 15), and Bronze Age sherds have been recovered from the Great Wold Dyke (Manby 1980, 328). However, such earthworks evidently continued to be dug, enlarged and remodelled, throughout the first millennium BC. Early Iron Age pottery was discovered in the bank of an earthwork close to the Tatton Sykes Monument (Grantham and Grantham 1965) and Middle–Late Iron Age pottery was found under the back of a linear earthwork at Walkington Wold (Bartlett and Mackey 1972). Although many of the earthworks appear to respect Early Bronze Age monuments (Mortimer 1905), they do on occasion overlies square barrows, which, at their earliest, date to the fourth century BC (as at Cowlam; Stead 1986). Dent (1984a) has demonstrated that the linear earthworks at Wetwang Slack continued to be modified into the Late Iron Age, and Cardwell (1989) has suggested a Roman date for the ‘digging through’ of a pit alignment to form a continuous ditch, at Cat Babbleton.

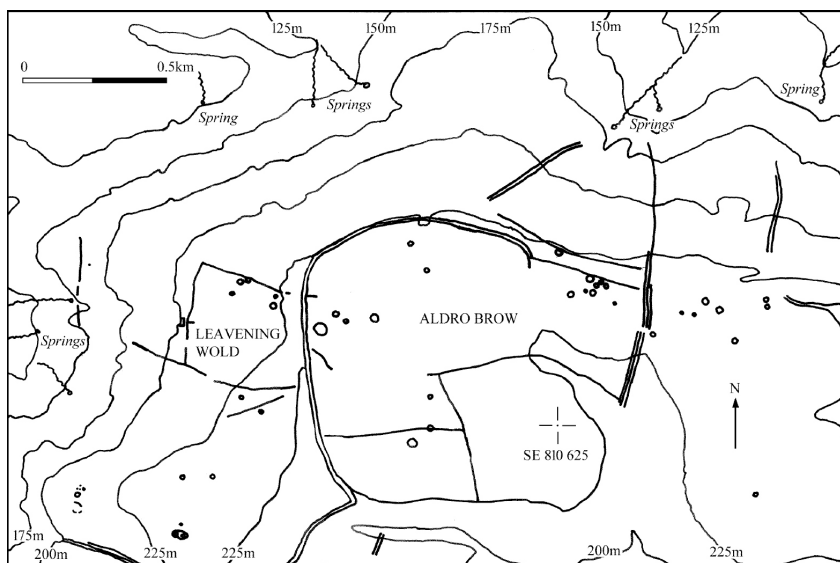


Fig. 1. Block of land enclosed by earthworks at Aldro (information from Stoertz 1997).

Although it is tempting to describe these networks of linear earthworks as ‘systems’, the above review suggests that this is misleading. The illusion of an ordered, synchronic landscape is a

product of the two-dimensional 'view from above' produced from aerial photographs; instead, excavation and morphological analysis show that many of them have very long histories of construction and addition. They do not therefore represent a unified process of landscape division and partition, but ongoing projects: long-term transformations and negotiations in rights of place, and the relationship of people and stock to land.

Elsewhere, similar phenomena have been interpreted as separating distinct communities or districts, as on Salisbury Plain, reminding us that architectural boundaries can also be social boundaries (Bradley *et al.* 1994). Fleming, however, has suggested that the co-axial fields of the Dartmoor reaves represent collective landholding negotiated at the level of the community, rather than an imposed system of land management (Fleming 1988, 70). Pryor, meanwhile, has argued that 'the rapid dividing-up of entire landscapes would indicate that pre-existing tenurial relationships were well understood and formalised' (Pryor 1998, 150). In other words, these projects represent the sedimentation of long-held rights of access to grazing pasture, cultivable soil and water resources. This argument has also been proposed by Fenton-Thomas (1999) for the Yorkshire Wolds, who argues for long-term continuity between early and later prehistory, in patterns of transhumance between the lowlands such as Holderness and the Vales of York and Pickering, and the Wolds themselves.

The analyses undertaken by Fenton-Thomas (1999), Stoertz (1997) and Mortimer (1905), suggest great intimacy between the linear earthworks and their local topography. The largest, long-ranging earthworks (such as the Great Wolds Dyke) can be seen as part of a group that run parallel to the major axes of topography, defining zones of higher land from the lowlands or valley bases. These are often sited on the shoulders of the chalk peneplain and along the sides of its dry valleys, sometimes running right across the heads of minor dales in their course. They are frequently punctuated by gaps, as if to allow access into zones of higher ground, but only at specific points. Other earthworks subdivide or partition these zones, forming what Fenton-Thomas (1999) has suggested may be 'grazing grounds' or 'pasturing estates'. These can be seen particularly in the area around Aldro (Fig. 1), for example,

Fimber or Kilham. Access between these regions is most easily gained through the heads of dales; these are often marked by a series of earthworks which splay outwards into the interior of raised grazing lands. They also therefore act as ‘funnels’, channelling and re-aggregating stock on their descent into the valleys. One of the best examples of this can be seen at Vicarage Closes, near Burton Fleming ([Fig. 2](#)). Some earthworks run along the bases of the valleys, as at Wetwang and Garton Slack, running down towards Elmswell. These appear to form the basis of trackways prescribing the easiest course of movement, often towards permanent springs or watercourses.

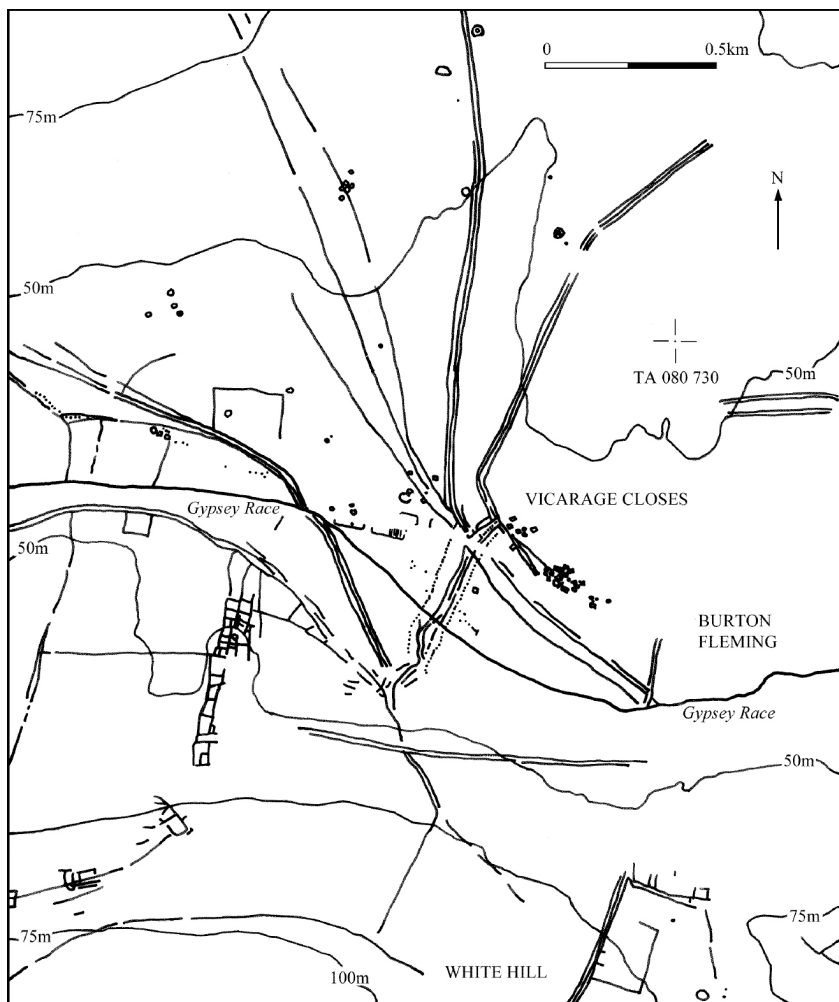


Fig. 2. Earthworks, pits and barrows at Vicarage Closes (information from Stoertz 1997).

The character and position of the earthworks suggest that to-and-fro movements between sheltered environments in the valleys and higher ground on the chalk massif were increasingly prescribed by architecturally defined paths and droveways. They therefore probably concern the moving of stock as much as the movement of people, into areas that were probably largely cleared for pasture (Wagner 1992). Managed woodland and arable cultivation may have been more limited to the slopes of the Wolds (*ibid.*).

Traditionally, this has been interpreted as the partitioning of the landscape into mutually exclusive territories. However, the boundaries of such units are by no means distinct.

This interpretation is derived in part from the contrast between enclosed and open settlement. Enclosed sites or 'hillforts' such as Thwing, Staple Howe and Grimthorpe, are interpreted as the central residences of competitive chiefdoms (Brewster 1963; see also Powlesland 1988; Bevan 1997). Stoertz notes that few of these 'defended' sites are conjoined to linear features; instead, 'many of them occupied positions within large blocks of land defined by the largest and longest of the linear earthworks' (Stoertz 1997, 65, fig. 33), reinforcing the image of these sites as 'central places'. The social elite is supposedly underpinned by control of agricultural surplus and unequal access to exotic materials. However, the so-called 'hillforts' of this period do *not* in fact represent a single phenomenon: some may be small farmsteads with residential structures, such as Staple Howe (Brewster 1963, but cf. Guilbert 1998); others however contain a range of storage features (pits and four- or six-post structures) with evidence for food and craft production and the exchange of exotic materials but few roundhouses, as at Devil's Hill (Stephens 1986) and Grimthorpe (Stead 1968). Paddock Hill, Thwing, is unique in its architecture and evidence for ceremonial activity (Manby 1985; 1986; 1990), whereas others such as Greenlands have little evidence of internal features (A. Pacitto pers. comm.) and could be stock enclosures. As the Wessex Hillforts Geophysical Survey Project demonstrated (Payne 1998), a reinterpretation of the date, use and function of such sites is long overdue.

These enclosed sites are complemented by scattered evidence for open settlement, such as some of the pit clusters at Woldgate and Kilham, which contained Early to Middle Iron Age ceramics, tools, decorative items, faunal and seed remains (Challis and Harding 1975, figs 24–6; Rigby 2005). An isolated roundhouse at Burton Fleming (Moorhouse 1972, 218) and scatters or spreads of occupation material at Octon Crossroads (Challis and Harding 1975, fig. 23), Wetwang Slack Area 11 (Dent forthcoming) and Cowlam (Stead 1986) may also date to this period. Meanwhile, at West Heslerton, an area of post-ring roundhouses, four-post structures

and shallow pits were loosely defined by a pit alignment, probably hedged along one side (Powlesland 1986).

The chiefdom model rests upon an unspoken assumption: that both enclosed and open settlements were permanently occupied by groups of different social status. A logical alternative is to propose that people may have been moving between enclosed and unenclosed settlements during different seasons or whilst undertaking particular tasks, such as storing harvested produce or gathering for events which involved feasting, and the making or exchanging of gifts. The aggregation of large sections of the community would explain the different nature of the features and deposits found within these enclosures compared with open settlements, without resorting to a redistributive chiefdom model. Instead, under these conditions, forms of authority may have emerged through the skilful and charismatic orchestration of people and things, during highly performative events. However, as has been argued in the case of Melanesia, this kind of achieved authority emerges from the mutuality of relationships. ‘Bigmanship’ is effectively *made* by others, who gain their agency from the witnessing and judging of the individual’s ability to draw out relations with them (Clay 1992, 731).

I have argued that social models premised on a settlement hierarchy can be challenged by alternative models of authority, and have also suggested that the portrayal of ‘territories’ as fixed and bounded may be inappropriate. Indeed, our very notion of what defines a ‘territory’ may also need rethinking. Godelier (1978, 400) argues that notions of property need not refer to exclusive ownership, but rather to principles concerning access, control, utilisation, transfer and transmission. These prescribe certain forms of behaviour, whilst prohibiting others, on pain of sanction or repression. Godelier discusses two pastoral groups – the Bassari of Iran (studied by Barth) and Mongol shepherds – who, due to the nature of their local environment, negotiate the *successive* occupation of wells and grazing areas by different groups. In order to manage the needs of neighbouring flocks and herds, and to allow pasture to recover, groups co-operate ‘by *abstaining from presence*’ at particular times and seasons. The earthworks of the Wolds might relate as much to patterns of successive occupation followed by the

recuperation of the land, as to the defining of exclusive access by different groups. What Godelier stresses, is that in order to be respected, these principles of property must be learned (1978, 401). It is to the practices and conditions through which this knowledge was gained, that this paper now turns.

Learning to live in the land

Knowledge of how to live in this land with others – where to go at particular times of the year, where to find water or the best grazing – could not be inherited passively. It had to be walked into, learned whilst following the swaying hips of cattle, the backs of sheep. It was repeatedly trodden into the land, indented by hoof prints, by churned turf, manure and mud, where herds or flocks surged through entranceways. Such knowledge was expressed and attested by the repeated wear of tracks and paths running alongside earthworks, as at Walkington Wold (Bartlett and Mackey 1972) and Ripplingham (Wacher 1962–6), and scuffed and worn entranceways such as those found at both Duggleby Lodge (Lawton 1992) and Fimber (Ehrenberg and Caple 1983; 1985).

When we talk of traditions and rights being ‘passed down’, we therefore acknowledge that they were actually learned tacitly, embodied in breath and gesture and gait, over seasons and years of droving and following stock. This somatic connection between people and place would not have been exclusive to people. Upland flocks are often described as being ‘heafed’ to the land (Hartley and Ingilby 1990; Hunt 1997). They have a strong knowledge of place (passed down from ewe to lamb) which informs where they graze at particular times of the year, returning repeatedly to favoured sheep scrapes for resting, scratching and rubbing, and sheltered spots chosen for lambing (Edmonds 2001). Cattle too, have strong diurnal rhythms of grazing, watering, and milking, which the herd will often initiate, led by its matriarch (Porter 1991). There may have been a strong sense then, in which knowledge of place and rights of way were carried forward in the herd or flock itself, moving as one with their herders or shepherds to new pasture, water or shelter. This *ambulatory* knowledge (Ingold 2000b) arose in the unfolding relation between people and animals, during episodes of tending, guarding, and guiding.

Instead of a social geography of bounded territories and central places, the later prehistoric landscape can be characterised by its rhizomatic network of nodes and connections. People and their stock generated a sense of belonging *through* their continual movement along pathways and inhabitation of places between.

Time and task

I have suggested that the character and position of the linear earthworks appears less concerned with defining exclusive access than with co-ordinating periodic gatherings or successive inhabitations, movements, and encounters. Such engagements drew the land into ‘particular focus’, and in so doing, *constituted* places (Ingold 2000a, 149). These would have become redolent with memories of previous arrivals and departures, gathering itineraries associated with particular groups, at specific times of the day or year.

Time itself may therefore have been defined in relation to place. Evans-Pritchard (1940, 99) noted that ‘one may hear a Nuer saying that he is going to “tot” or “mai” [the two main seasons of the Nuer calendar] in a certain place’. Amongst this pastoral people of the southern Sudan, places *were* times. The terms used to describe seasons referred not to an abstract temporal unit, but to the cluster of social activities and relationships they represented. He elaborates:

‘time is to them a relation between activities... the daily timepiece is the cattle clock, the round of pastoral tasks, and the time of day and the passage of time through a day are to a Nuer primarily the succession of these tasks and *their relation to one another*’ (*ibid.*, 101–102; my emphasis).

A distinct diurnal and seasonal temporality would have arisen through the character of tasks at hand, and their relation with other kinds of work such as tilling, weeding and harvesting, cooking and craftwork. Evans-Pritchard captures the interdependence of such tasks:

‘even when there is no active co-operation the whole community passively participates... a single man may drive a herd to

pasture, a single boy may fish in river shallows, and a single woman may cook, but they can only do these things because they belong to a community and because their actions are related.' (*ibid.*, 91)

These rhythms speak of divisions of labour that enabled a particular group within the community (perhaps defined by age-set or experience) to tend stock, to the exclusion of other tasks. Their close association with cattle or sheep may have been a fundamental part of their sense of identity, defining initiation, skill or standing within the group. Importantly, as with the case of the Nuer, the composition of that 'community' may therefore have changed dramatically according to the time of the year or place in question.

Building relations

This scheduling of work and division of labour also applied to the building of the earthworks themselves. Due to the limited excavation of earthworks along their length, it is difficult to comment on the way in which such work was organised and carried out. However, labour spent on the earthworks had consequences for other activities, requiring considerable commitment over prolonged periods of time. It may have been undertaken by the whole community at slack times of the year, or by a particular segment of it, dedicated to the project. A pattern for this kind of work may have been established during the building of a range of different enclosures or 'defended' sites, and subsequent repairs and enhancements to them.

Post settings under the western and eastern banks of earthworks at Fimber (Ehrenberg and Caple 1983; 1985) and at Vessey Pasture (Buckland *et al.* 1992) certainly suggest a phase of planning using fences, poles or stakes, before major construction began. Many of the earthworks started life as separate pits (sometimes surviving as lengths of pit alignment, such as those near Paddock Hill, Thwing) or small trenches, later dug through to form continuous ditches. Mortimer noted that:

'in some places first one side of the rampart and then the other had been cast up. This proves that different lengths of ditches were excavated by separate gangs of workmen, in advance of

each other.’ (Mortimer 1905, 377)

Such ‘gang-dug’ sections have been recorded at Caythorpe (Abramson 1996), West Heslerton (Powlesland 1986), and Cat Babbleton (Cardwell 1989). At Lady Graves, Fimber, pits were separated by small causeways, flanked by parallel banks (Mortimer 1905). Perhaps initially these ‘boundaries’ were deliberately symbolic, retaining a permeable or osmotic character. Over time, however, many of them became more formidable barriers to movement especially for driving cattle, with ditches of up to 1.5 m deep, flanked by steep banks. Pryor (1998) notes that unless such banks are topped by a quickset hedge or thicket, they would not have been effective for sheep. Some became embellished with five or six banks and flanking ditches, enhancing their visual appearance rather than functionality. The earthworks were monuments to labour.

What archaeologists have consistently failed to stress is that they do not represent a ‘map’ of relations, rights of access and territories, so much as the conditions through which relations with others and the world, were generated, learned and understood (Sahlins 1968; Godelier 1980). They embody the sweat, pride and curses of generations, prising and picking at the chalk; the upcast of countless baskets and back-scraping of soil (Shaw 1970). The shoulder-to-shoulder work would have cemented strong bonds amongst gangs of diggers, but it may also have become an occasion in which differences of opinion arose between them. The piecemeal character of the earthworks suggests that there was no over-arching authority directing the work, but more horizontal relations of power *would* have come to the fore through strength, skill and experience (*ibid.*). Competition over prowess, speed or more aesthetic concerns may have resulted in considerable friction between groups ostensibly working towards common goals.

In formalising particular points of ingress and egress, places of aggregation and encounter, the earthworks may also have cut across established pathways and long-standing rights. The very cutting and ‘altering’ of the earth – to borrow Raymond Williams’ (1989) phrase – may itself have been a contentious act that defined the rights of some at the expense of others. Boundaries have the potential to sever flows and interconnections as well as generate them.

However, they do not in themselves create distinctions or define difference, but rather create the conditions in which difference can be performed. An architecture of prescribed paths and framed thresholds creates the conditions for encounter, confrontation and surveillance. It is therefore likely to have been accompanied by particular forms of resistance or transgression, such as trespass and occupation, over-grazing, over-stocking, fouling, trampling, and even levelling of the earthworks themselves. Osgood's excavations at Tormarton, which revealed the murdered remains of several individuals within a length of earthwork which had been levelled soon after the event, remind us that such projects were contentious and may frequently have led to violence (Osgood 1999).

In foregrounding the political aspect of these works, it becomes clear that they enabled a rather different sense of history to emerge. Whilst the long-term consequences of this process were beyond the perception of its agents, people were able to reflect on the qualitative aspect of time through its social, political and moral character: through the generational histories of relations transformed through these mutual projects or conflicts of interests. Particular age-sets would have been identified with specific works, and their attendant events. They provided the community with impressive material mnemonics, Ingold's (2000a) 'congealed histories', through which subsequent generations defined themselves and their rights, in relation to the past.

Mythical landscapes

The earthworks also drew into focus much more ancient signs of how the land came into being. Archaeologists have realised that to inhabit the Iron Age landscape was to also inhabit the traces of previous occupations: ancient works and fragments of the Mesolithic, Neolithic and Bronze Age (Gosden and Lock 1998). These were the 'mythical landscapes' of the Iron Age (Barrett 1999) that had to be explained and interpreted by each generation. As Bradley (2000) has argued, such inhabitants need not have made distinctions between 'natural' and 'cultural' artefacts, but any such feature had the potential to demand explanation, to demand stories which answer the question 'what happened here?' (Chamberlin 1979). Ancestral, other-worldly or spiritual presences might be

immanent in both. They were part of a web of marks and signs through which groups narrated a particular understanding of the past, and their place in it.

The character of this relationship is important; what was remembered guided and constrained how it could be imagined, culminating in a 'posited state of affairs, a particular universe of objects and events' (Basso 1996, 6), or to use Bloch's phrase, particular 'ways of being in history' (1996). It was part of the way in which diverse, multiple and conflicting interests were managed through communal memories (Connerton 1989). People would have formed deeply personal, biographical associations with places but as Basso (1996) argues, such encounters can be occasions for telling stories that evoke moral responsibilities and the consequences of transgression, in an oblique manner. These tales about places are used to make people 'live right', to encourage them to act appropriately towards the land, fellow humans, creatures and ancestors.

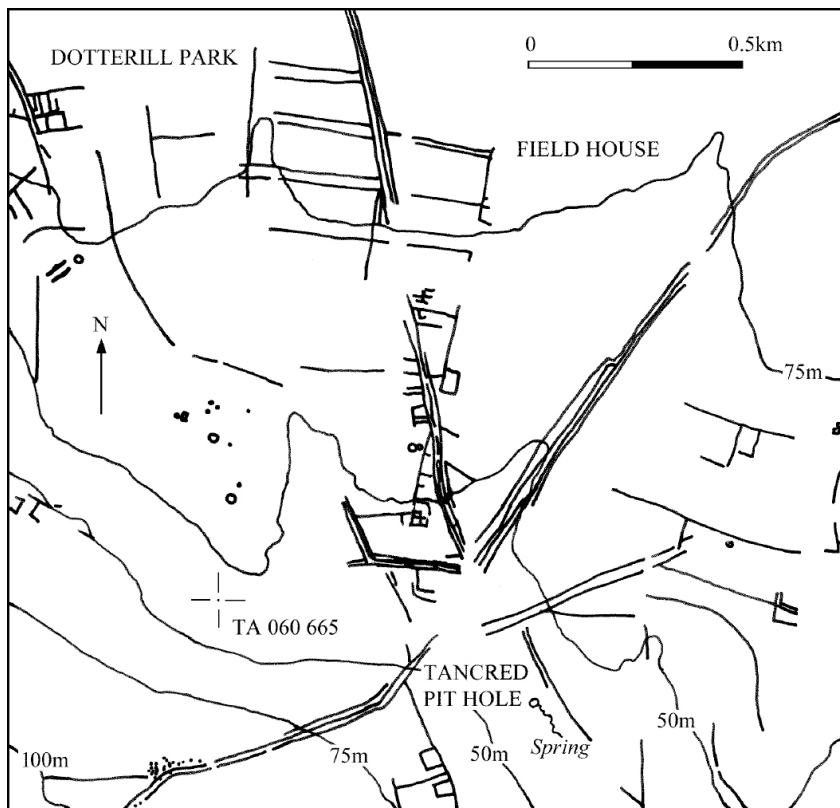


Fig. 3. Earthworks converging on the spring site at Tancred Pit Hole (information from Stoertz 1997).

The architecture of the linear earthworks acted to ‘educate attention’ towards such features (Ingold 2000a). Springs form the terminus of a number of earthworks along the scarp edge of the Wolds between Aldro and Birdsall. Mortimer (in Hicks 1978, 21) notes that one of these – Leavening Wold spring – ‘was never known to fail, and in times of drought it was the nearest source from which good water could be obtained [from Aldro]’. Other earthworks cluster around ‘spelt holes’ such as Tancred Pit Hole near Kilham, from which water would have gushed unpredictably, in late winter/early spring or after heavy rains (Fig. 3). Earthworks enfold the natural pond at Fimber and there is a monumental, six-ditch wide stretch of earthwork at Fridaythorpe, again curtailing access to the pond. Bevan (1999) argues convincingly that there is a close

relationship between earthworks and the seasonal streams known as ‘gypsies’ in the Great Wolds valley and neighbouring areas.

Whilst sheep can manage if necessary on the moisture obtained from grazing, cattle require fresh water two or three times a day (a total of 12–15 gallons, especially if in lactation; Porter 1991). The progressive loss of upland water preserved in dolines by the Middle Bronze Age (Hayfield *et al.* 1995), and the general scarcity of water on the Wolds as a whole, would have meant that negotiating access to fresh water was extremely important. As different groups came together with their herds at the small meres at Fimber, Fridaythorpe and Sledmere, or down to the Gypsy Races, there may have been scenes of confusion and contestation. Even in a post-enclosure landscape, access to water across someone else’s property was carefully prescribed by ‘rake rights’; on taking occupancy of Vessey Pastures, a High Wold Farm, the Greames were required to acknowledge the ‘ancient privilege’ enjoyed by the Birdsall estate to drove sheep into the pasture grounds, entering:

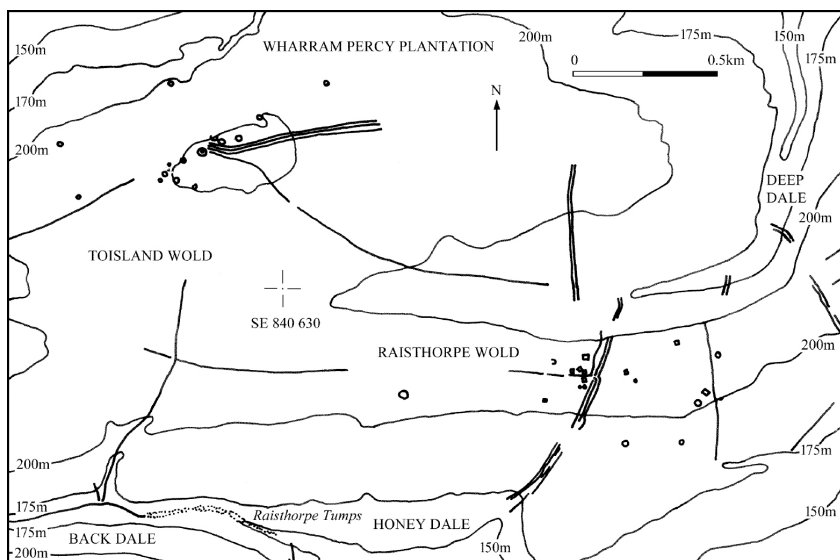


Fig. 4. Raisthorpe tumps, the Wharram Percy barrow group and Raisthorpe Wold barrow group (information from Stoertz 1997 and Mortimer 1905).

‘each morning from 10am from Lady Day to Michaelmass and [to] proceed slowly to a spring near Raisthorpe Grounds where they remain at liberty to graze to Raisthorpe fence till a man can

sole a pair of shoes and then [to be] driven slowly away and right off Mr. Greame's estate.' (Hull Univ. Libr. DDLG 46/6, cited in Wagner and Hayfield 1996, 58)

Interestingly, time here is defined in relation to another task. However, such rights or customs came under pressure in times of drought. In the dry summer of 1826, the residents of Fridaythorpe marched on the village of Fimber 'with the intention of taking by force what had previously been granted them as a favour' (Mortimer, in Hicks 1978, 3), namely, access to the two meres: the upper reserved for drinking water, the lower for cattle. The 'Battle of Fimber' resulted in a desperate brawl, involving broken heads and duckings in the mere, before the 'invaders' were expelled. Mortimer notes how this event was looked on with 'much satisfaction, and a considerable amount of pride' (*ibid.*, 4) by the Fimber cottagers. Access had been granted by consent: its transgression became a moment in which identity was polarised, redefined by tighter, local affiliations.

These historical anecdotes evoke the importance of water within this landscape. Despite the lower population densities of prehistory, there may have been conditions under which access to water became a source of contention and disagreement. Drought, disease or the befouling of water, rifts between families or hostilities arising from slights or other transgressions, may have led to the curtailing of privileges or rights. The ways in which the earthworks increasingly prescribe access of people and stock to water, over the last millennium BC, should be understood within this social and environmental context.

Other phenomena also became caught up in earthwork projects, such as the strange pillars of chalk breccia known locally as 'fairy stones' (in Fairydale) at which another pair of earthworks terminate. Produced by fault activity, they stand proud of the faster eroding chalk. Sensitivity to such faults, perhaps located by differences in surface topography or vegetation, was also noted in excavation of an earthwork at Birdsall Dale. Here, the ditch had been dug over the fissure of a fault line, as if exaggerating and monumentalising this incision in the land (Buckland *et al.* 1992; Wagner pers. comm.). Elongate mounds of naturally deposited chalk known as the 'Raisthorpe tumps' in Back Dale, were also

incorporated into the run of a long earthwork along the base of this dale (Fig. 4; Mortimer 1905, 19). It may have been thought that these discontinuous mounds were banks raised by ancestral inhabitants of the dales, whose work they were continuing to respect and elaborate.

Within the course of other earthworks are swerves in their course (such as between Glebe Cottage and Paddock Hill), or small gaps or breaks that may not have been entranceways. It is easy to forget that some of the most impressive features of a largely cleared landscape would have been ancient trees, whose branches and root systems bore testimony to their many years of growth. These may also have become features within the new architectural projects of the linear earthworks.

Finally, the builders of these earthworks show a consistent fascination with the barrow cemeteries of the Later Neolithic and Early Bronze Age. They form the nexus of a number of earthworks, as in the Wharram Percy Group (Fig. 4), excavated by Mortimer (1905, Group 2), and at Woldgate. Some earthworks terminate at isolated barrows such as Crowsdale, whilst others skirt around the edge of the barrow's ditch, forming a slight deviation in their course, for example, at Thwing. Barrow 88 in the Aldro Group (Mortimer 1905, Group 3) stood in the outer rampart of a triple-ditched earthwork, and Barrow 256 was incorporated into the junction of three earthworks, also triple-ditched in construction (Fig. 5). Amongst the Calais Wold group, Barrow 38 was heightened by spoil cast up from the earthworks which clip its outer bank. The barrow marks an entrance, just to its side, through the earthwork banks (Mortimer 1905, 160, Group 8).

Many of these monuments would have been well-known landmarks, by which people orientated themselves in the past, and described journeys or rights of way. Others features were more subtle, requiring an initiated eye. As the congealed evidence of past creativity or movement – the projects and actions of earlier people or beings – they would also have been linch pins in ‘ancestral geographies’ (Edmonds 1999), the stories by which people explained how the present world came into being. Such stories are primordially *recreative* (Kearney 2002, 8), attuning people’s attention to particular aspects of the landscape, unfolding hitherto

undiscerned relations. By tapping the places where otherworldly or ancestral presences were made immanent, they were involving the past in the present.

Certain groups however, not only conjoined past monuments to these new works, but removed all trace of them. In the make-up of a bank close to the Tatton Sykes Memorial, the Granthams (1966, 356) discovered scattered remains of a Food Vessel, Collared Urn, cremated bone, flint, and a piece of bronze wire; yet no trace was left of the barrow. A linear dyke was cut through the centre of Barrow 256 (Mortimer 1905, 61), using its spoil to enhance the ridges of the bank and spreading fragments of cinerary urn, cremated bone, flint, sheep/goat bone, across the face of this new work (see Fig. 5).

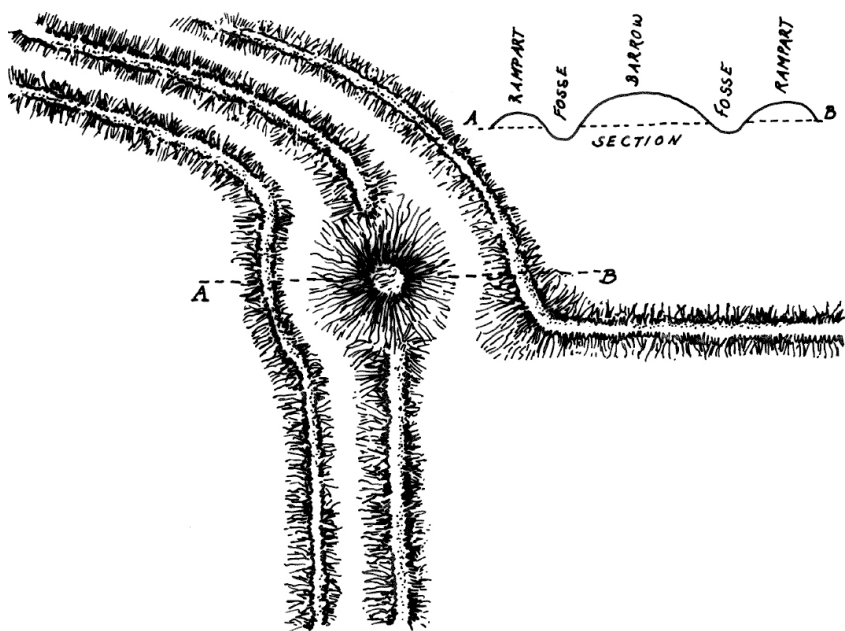


Fig. 5. Barrow 256, Aldro Group (after Mortimer 1905, fig. 120).

Another earthwork bisected Barrow 127 (Mortimer 1905, 51–2), this time leaving a cremation intact in the eastern core of the barrow, which was remodelled to resemble an upcast bank. These more active interventions in the remains of the past were interpreted by Mortimer as acts of desecration, as the barrows were:

‘destroyed in a ruthless manner, probably by a people having no regard for the monuments so carefully and so laboriously raised, by cutting a trench right through it and squandering the once treasured contents.’ (Mortimer 1905, 52).

This interpretation fitted Mortimer’s model of an invasion during the Iron Age; ironically, he did not see his own excavations as disrespectful! These interventions may have been motivated by a pragmatic curiosity, a desire for imagined treasure or a practical exploitation of barrow spoil. But some barrows may have been contentious features that had to be subsumed within new projects: removed physically from the landscape to remove them permanently from people’s social conscience and memory. In both cases, as they sifted through the silt, people would have handled fragile human remains distorted by fire, and artefacts or materials which were very different from those which they possessed. Through these encounters, such remains may have become caught up in stories about the past.

Refiguring rights

I have suggested that the architectural relationships between the earthworks and other features represent attempts creatively to re-describe the world as it was perceived in the Early Iron Age, redefining people’s relations with it. Such ‘history-making’ practices had two consequences.

First, the building of the linear dykes had the potential to change the *conditions* through which rights were negotiated. What had once been a matter of memory, oral testimony and debate, reinscribed each year through paths and trackways, began to be put beyond negotiation. The earthworks monumentalised ways of moving around the landscape, proscribing others. They circumscribed areas of pasture and resources such as water, blocked access and directed encounters: *qualitatively* changing people’s day-to-day experiences. Even if these projects began as sedimentations of well established, communally respected rights, these architectural practices altered the media through which they were remembered, passed on or contested.

Second, even though these marks and monuments may have featured for generations in people’s narratives of identity and

belonging, their incorporation into the earthworks began to change the role of the past in the present. The earthworks laid *specific* claim to *particular* monuments. This was not merely a process of legitimation by referencing the past; the ancient dead and traces of their works were being used as strategic resources. They were being activated as a presence and a force within political discourses of the living.

Making exchanges

The relationship between the living and the dead was sustained through a series of exchanges, in which round barrows became the foci for contemporary mortuary performances. In Painesthorpe barrow 111, an oval hole containing ‘burnt wood slightly mixed with a little burnt bone’ was covered by a plain urn with slightly rounded shoulders and an inturned rim (Mortimer 1905, 128, fig. 328). At Riggs barrow 33, two shallow scoops were cut into the barrow at separate times. Cremated bones were placed in a small carinated bowl in one hollow (*ibid.*, 175, fig. 441) and in a slack-shouldered jar with bevelled rim in the other (*ibid.*, 176, fig. 442). In 1967, the Granthams excavated a small cemetery of four urned cremations in Garton Slack (Manby 1980, 351; Brewster 1980).

These burials have been identified as part of a formal burial rite of cremation dating to the Later Bronze Age, usually in ‘secondary situations in barrow mounds’ using bucket/barrel urns or smaller jars and bowls (Manby 1980, 319). Garroby Wold C99 (‘Kity Hill’) may be another example of this burial rite, in which a few burnt bones were found with a biconical jar with everted rim and internal bevel (Mortimer 1905, 149, fig. 396). A second hollow contained ‘cremated bones mixed with a large quantity of charcoal’ and fragments of vessels above and below them which were ‘irreparably crushed’ (*ibid.*, 150). Manby also found a cremation, contained within a carinated jar with finger-tip fluting, inserted into a pit in the central hollow of the ‘hillfort’ of Thwing; a converted henge monument which was also redolent of the ancient past (Manby 1980, 355; 1985, fig. 2). Finally, at Aldro barrow 108, a ‘heap of clean and well-calcined bones’ of an adult were found in association with ‘numerous pieces of bronze weapons, burnt and fused... 2 or 3 swords or daggers... part of a bronze handle... other pieces,

doubled and twisted... [a] circular fragment of bronze... [which held] a circular piece of polished crystal or glass... and a large piece of bronze [containing] a similar glass object' (Mortimer 1905, 56, fig. 108). These items, which had evidently been included in the funeral pyre, were accompanied by thin vessel sherds, including one with finger-tip and nail decoration.

Such burials may not have been limited to cremations, and may show continuity into the Iron Age period. The assemblage from Aldro barrow 108 also includes a bronze ferrule comparable to those found in Late Hallstatt wagon graves in west central Europe (Challis and Harding 1975, 42–3, fig. 20; Harding 2004, 26). Towthorpe barrow 43 contained a contracted inhumation associated with a plain biconical urn with internal bevelled rim (Mortimer 1905, fig. 29). Five undated crouched inhumations were also found by Bartlett, inserted into round barrows at Rudston and Burton Fleming (discussed in Stead 1991).

In other cases, no human remains were found. Fragmentary sherds of Late Bronze Age and Early Iron Age pottery, distinguished by their biconical form, fingertip impressions and slashed rim, were retrieved from the secondary fill of the outer ditch of a barrow at Walkington Wold (Bartlett and Mackey 1972, 8, fig. 14 nos 41 and 42; fig. 5, layer 12). An antler tine pick was found in a small trench cut into the side of Greenwell's 'cenotaph' barrow XLVII, in Weaverthorpe (Greenwell 1877, 201). Two vessels of Early Iron Age date (a plain jar and one decorated with finger-tipped rim and cordon) were found close by, associated with ox bone and charcoal (Challis and Harding 1975, fig. 21, nos 4 and 5). At Ganton Wold, in barrow XXVII, a shallow oval hole had been dug off-centre to the mound, into which a barrel urn, pierced with three pairs of perforations near the rim, had been placed but no cremation was noted at the time of excavation (Greenwell 1877, 174, fig. 92). A scatter of fragmentary sherds derived from the ploughing out of 'superficial interments' was also recorded at Barrow II, Langton near the 'Three Dikes' entrenchments (Greenwell 1877, 136). Such vessels may have been surrogates for the body, where it was not present for burial. However, the presence of these pots may suggest that there were other feasts, anniversaries or ceremonies, during which deposits were made at the edge of ancient monuments.

These acts and offerings suggest a desire to negotiate with the ancestors, especially by associating an important member of one's family or community with the past. Such appeals began to construct a very different relationship with history, placing oneself in direct relation to a particular past.

The square barrow burial rite

This is the context in which the square barrow burial rite – with its close association with water, linear earthworks and trackways (Bevan 1999) – emerges during the fourth or third century BC. Although Bevan's analysis suggests that there is little connection between round barrows and square barrow cemeteries, many of them do contain earlier burials within their midst. At Wetwang Slack, a series of Early Bronze Age monuments delimit the eastern edge of the cemetery, including Barrow D, which is encircled and redefined by a bank and ditch (Dent 1979, 27). Small cemeteries of less than ten barrows (which are excluded from Bevan's analysis) were often raised close to round barrows and earthworks, as at Burton Agnes Field West (TA 094642), Dogstrop Plantation (SE 860674), Leavening Wold (SE 798631), Raisthorpe Wold (SE 852627) and Washdike Spring (SE 860717). These small clusters of monuments ape the architectural form of Bronze Age monuments; in the early period they are often large (Stead 1991), and weather quickly to form a more rounded tumulus within a square ditch (Proctor 1855). Some are not square at all: Sheppard (1939) argues that many of the barrows at Eastburn airfield were round, as at Skipwith Common (Proctor 1855). Round barrows of Late Iron Age date also appear in the large cemeteries such as Wetwang Slack and Kirkburn (Stead 1991).

This suggests that there is considerable architectural 'play' with the form of the monument, which at times may have deliberately aped more ancient features in the landscape. More importantly, funeral activity preceding the introduction of this rite had made it possible to rethink one's relationship with place: to extend oneself in time by associating particular forebears with the ancient past. This enabled people to rethink the realities of their own lives: to conceive of a sense of ancestry and descent, embodied in the remains of the recent dead, attached to particular places in the

landscape.

However the square barrow burial rite was introduced into the region, it was taken up and understood within this pre-existing discourse on rights of place and ancestry. Previous generations had reproduced a sense of belonging through their repeated, successive inhabitation of places over time. What had changed were the *conditions* through which these claims were being enacted and expressed. Once people began remembering their dead at specific monuments, they became indelibly associated with these locales, rather than being immanent in the many places in which they had lived. Monuments focus attention, composing an arena for performance, a mnemonic through which people begin to officially 'forget' the dead, enabling their transformation into ancestors (Forty and Küchler 1999). The dead become a presence in their own right: an interventionary community, invoked and therefore active in the affairs of the living (Berger 1996).

By the Later Iron Age, square barrows, round barrows and unmounted burials were squashed and squeezed into the cemetery like frogspawn, as if desperate to be located next to particular forebears (Dent 1984a). Limited evidence from non-metric traits (Stead 1991) and the analysis of adjacent series of burial goods (Giles 2000) suggests that this may reflect real or perceived kinship, reproduced in affiliations between burials. The Merina of Madagascar, who also bury their dead in monumental tombs, provide a useful analogy here. At birth, a baby's kinship alignments are considered to be relatively 'open' and 'soft' (Bloch 1996, 226). Little by little, through the course of his or her life, a child's kinship is created through engagements with others: it only becomes fixed 'after the final placing of the dead in the tomb' (*ibid.*, 225). Such cemeteries therefore make it possible to review the contribution that forebears make to one's lineage, and therefore one's own substance. Under these conditions, a sense of descent and inheritance rooted in place (the 'genealogical' model) may well have become *thinkable*, even if in reality this discourse had to be reproduced through people's day-to-day actions in and relations with the social world.

Conclusion

According to Ingold (2000a, 144), a relational approach to identity stresses that persons are characterised ‘not by the substantive attributes they carry into the life process, but by the kind of paths they leave’. This paper has sought to characterise those paths, earthworks and burials of Late Bronze–Early Iron Age East Yorkshire. By exploring the connections embodied in these projects (near and distant, past and present), I have argued that identity cannot be identified by lines on a map, by one particular cultural trait, nor by the name bestowed upon it through archaeological classification. These all represent attempts to close down the meaning of something which was much more socially fluid and contextually specific. Instead, I suggest that identities only had meaning through the network of relations realised by people’s participation in particular projects.

This implies that narratives of invasion or indigenous continuity may not help us understand the political and social discourses that concerned past peoples. An interest in such issues tells us more about our own concerns with origin and identity; it is a privilege of analytical overview, operating at a timescale that had no meaning for these communities. Methodologically, we should instead focus on the rhythm, character, and composition of day-to-day life, through which relationships were reproduced. It is only by working at the scale at which the landscape was inhabited, experienced, and understood (Edmonds 1999), that we will uncover moments of contest, conflict, and violence; the radical disjunctures which speak of the political nature of historical change.

Through such an approach, I have tried to sketch the long-term transformation in conditions through which rights of place and relationships with others were generated and negotiated. I have therefore sought to situate the adoption of the square barrow burial rite within the *historical* context into which it was introduced. In conclusion, I would therefore suggest that the real challenge facing archaeologists is the choices we make in the stories we tell: how we animate the very real, material effects of past lives, in our accounts.

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Note

1. Since the paper was written, a strongly involuted iron brooch has been identified by x-radiography amongst the finds from the grave; this would suggest a somewhat later date, perhaps in the second century BC.

Bibliography

- Abramson, P. 1996. Excavations along the Caythorpe Gas Pipeline, North Humberside, *Yorkshire Archaeological Journal* 68, 1–88.
- Barrett, J. 1994. *Fragments from Antiquity*. Oxford: Blackwell.
- Barrett, J. 1999. The mythical landscapes of the British Iron Age, in W. Ashmore and A.B. Knapp (eds), *Archaeologies of Landscape*, 253– 268. Oxford: Blackwell.
- Bartlett, J.E. and Mackey, R.W. 1972. Excavations on Walkington Wold 1967–1969, *East Riding Archaeologist* 1, 1–93.
- Basso, K.H. 1996. *Wisdom Sits in Places. Landscape and Language among the Western Apache*. Albuquerque: University of New Mexico Press.
- Battaglia, D. 1990. *On the Bones of the Serpent. Person, Memory and Mortality in Sabarl Island Society*. London: University of Chicago Press.
- Bauman, Z. 1992. Soil, blood and identity, *Sociological Review* 40, 675– 701.
- Berger, J. 1996. *Pages of the Wound*. London: Bloomsbury Circle Press.
- Berggren, K. 2000. The Knowledge-Able Agent? On the paradoxes of power, with a comment by B. Chan and T. Georgousopoulou, in C. Haltorf and H. Karlsson (eds), *Philosophy and Archaeological Practice*, 39–52. Lindome: Göteborg Press.

- Bergson, H. 1910. *Time and Free Will*. London: Swan Sonnenschein.
- Bevan, B. 1997. Bounding the landscape: place and identity during the Yorkshire Wolds Iron Age, in A. Gwilt and C. Haselgrove (eds), *Reconstructing Iron Age Societies*. Oxford: Oxbow Monograph 71.
- Bevan, B. 1999. Land-Life-Death-Regeneration: interpreting a Middle Iron Age landscape in eastern Yorkshire, in B. Bevan (ed.), *Northern Exposure: Interpretative Devolution and the Iron Ages in Britain*, 123–148. Leicester: Leicester Archaeology Monograph 4.
- Bloch, M. 1996. Internal and external memory. Different ways of being in history, in P. Antze and M. Lambek (eds), *Tense Past: Cultural Essays in Trauma and Memory*, 215–233. London: Routledge.
- Bourdieu, P. 1977. *Outline for a Theory of Practice*. Cambridge: Cambridge University Press.
- Bradley, R. 2000. *The Archaeology of Natural Places*. London: Routledge.
- Bradley, R., Entwistle, R. and Raymond, F. 1994. *Prehistoric Land Divisions on Salisbury Plain*. London: English Heritage Archaeological Report 2.
- Braudel, F. 1980. *On History*. Chicago: University of Chicago Press.
- Brewster, T.C.M. 1963. *The Excavation of Staple Howe*. Wintringham: East Riding Archaeological Research Committee.
- Brewster, T.C.M. 1980. *The Excavation of Wetwang and Garton Slacks*. Malton: East Riding Archaeological Research Committee Prehistoric Excavation Reports 2.
- Brück, J. and Goodman, M. (eds) 1999. *Making Places in the Prehistoric World: Themes in Settlement Archaeology*. London: University College London Press.
- Buckland, P., Donohue, R., Fenton-Thomas, C. and Henderson, J. 1992. *Recent Fieldwork on the Yorkshire Wolds*. Unpublished interim report, University of Sheffield.
- Butler, J. 1993. *Bodies that Matter*. New York: Routledge.
- Cardwell, P. 1989. Excavations at Cat Babbleton Farm, Ganton, North Yorkshire, 1986, *Yorkshire Archaeological Journal* 61, 15–27.
- Challis, A.J. and Harding, D.W. 1975. *Later Prehistory from the Trent to the Tyne*. Oxford: British Archaeological Reports British Series 20.
- Chamberlin, E.R. 1979. *Preserving the Past*. London: Dent.
- Chapman, M. 1992. *The Celts*. London: Macmillan.
- Childe, V.G. 1929. *The Danube in Prehistory*. Oxford: Oxford University Press.
- Clark, G. 1966. The invasion hypothesis in British archaeology, *Antiquity* 40, 172–189.
- Clay, B.J. 1992. Other times, other places: agency and the Big Man in central New Ireland, *Man* (New Ser.) 27(4), 719–733.

- Collis, J. 1996. Celts and Politics, in P. Graves-Brown, S. Jones and C. Gamble (eds), *Cultural Identity and Archaeology*. London: Routledge.
- Connerton, P. 1989. *How Societies Remember*. Cambridge: Cambridge University Press.
- Dent, J.S. 1979. Bronze Age burials from Wetwang Slack, *Yorkshire Archaeological Journal* 51, 23–39.
- Dent, J.S. 1982. Cemeteries and settlement patterns of the Iron Age on the Yorkshire Wolds, *Proceedings of the Prehistoric Society* 48, 437–457.
- Dent, J.S. 1984a. *Wetwang Slack: an Iron Age Cemetery on the Yorkshire Wolds*. Unpublished M.Phil. thesis, University of Sheffield.
- Dent, J.S. 1984b. Wetwang Slack, *Current Archaeology* 93, 30.
- Dent, J.S. 1984c. Two chariot burials at Wetwang Slack, *Current Archaeology* 93, 302–306.
- Dent, J.S. 1985. Three cart burials from Wetwang, Yorkshire, *Antiquity* 59, 85–92.
- Dent, J.S. forthcoming. *Excavations at Wetwang Slack*.
- Edmonds, M. 1999. *Ancestral Geographies*. London: Routledge.
- Edmonds, M. 2001. *Prehistory in the Peak*. Stroud: Tempus.
- Ehrenberg, M. and Caple, C. 1983. Excavations at Fimber, Yorkshire. Interim Report, *Yorkshire Archaeological Society Prehistoric Research Bulletin* 20, 7–8.
- Ehrenberg, M. and Caple, C. 1985. Excavations at Fimber, Yorkshire. Interim Report, *Yorkshire Archaeological Society Prehistoric Research Bulletin* 22, 7–8.
- Evans, J. 1872. *The Ancient Stone Implements, Weapons and Ornaments of Great Britain and Ireland*. London: Longman.
- Evans, J. 1881. *The Ancient Bronze Implements, Weapons and Ornaments of Great Britain and Ireland*. London: Longman.
- Evans-Pritchard, E.E. 1940. *The Nuer*. Oxford: Oxford University Press.
- Fabian, J. 1983. *Time and the Other: How Anthropology Makes its Object*. New York: Columbia University Press.
- Fenton-Thomas, C. 1999. *Forgotten Wolds: Late Prehistoric and Early Historic Landscapes on the Yorkshire Chalk*. Unpublished Ph.D. thesis, University of Sheffield.
- Fleming, A. 1988. *The Dartmoor Reaves*. London: Batsford.
- Forty, A. and Küchler, S. 1999. *The Art of Forgetting*. Oxford: Berg.
- Giles, M. 2000. *Open-weave, Close-knit: Archaeologies of Identity in the Later Prehistoric Landscape of East Yorkshire*. Unpublished Ph.D. thesis, University of Sheffield.
- Godelier, M. 1978. Territory and property in primitive society, *Social Science Information* 17, 399–426.

- Godelier, M. 1980. Work and its representations: a research proposal, *History Workshop Journal* 10, 164–174.
- Gosden, C. and Lock, G. 1998. Prehistoric Histories, *World Archaeology* 30, 2–12.
- Grantham, C. and Grantham, E. 1965. An earthwork and Anglian cemetery at Garton-on-the-Wolds, East Riding, Yorkshire, *Yorkshire Archaeological Journal* 41, 355–360.
- Greenwell, Rev. W. 1877. *British Barrows. A Record of the Examination of Sepulchral Mounds in Various Parts of England*. Oxford: Clarendon Press.
- Greenwell, Rev. W. 1906. Early Iron Age Burials in Yorkshire, *Archaeologia* 60, 251–324.
- Guilbert, G. 1998. A reinterpretation of Staple Howe. Paper presented to the *Northern Pasts* conference, Newcastle University, April 1998.
- Harding D.W. 2004. *The Iron Age in Northern Britain*. London: Routledge.
- Härke, H. 1998. Archaeology and migrations. A problem of attitude? *Current Anthropology* 39 (1), 19–45.
- Hartley, M. and Ingilby, J. 1990. *Life and tradition in the Moorlands of North-East Yorkshire*. Otley: J.M. Dent.
- Hawkes, C.F.C. 1968. Notes and news: response to ‘British Prehistory: the Invasion Hypothesis’, *Antiquity* 62, 297–298.
- Hayfield, C., Pouncett, J. and Wagner, P. 1995. Vessey Ponds: a ‘prehistoric’ water supply in East Yorkshire?, *Proceedings of the Prehistoric Society* 61, 393–408.
- Heidegger, M. 1962. *Being and Time*. Oxford: Blackwell.
- Hicks, J.D. (ed.) 1978. *A Victorian Boyhood on the Wolds: the Recollections of J.R. Mortimer*. Beverley: East Yorkshire Local History Society 34.
- Hill, J.D. 2002. A new cart/chariot burial from Wetwang, East Yorkshire, *Past* 38, 2–3.
- Hodson, F.R. 1964. Cultural groupings within the British pre-Roman Iron Age, *Proceedings of the Prehistoric Society* 30, 99–110.
- Hunt, J. 1997. *Small-scale Sheep Keeping*. London: Faber and Faber.
- Ingold, T. 1993. The temporality of landscape, *World Archaeology* 25, 152–174.
- Ingold, T. 2000a. Ancestry, generation, substance, memory, land, in Ingold 2000c, 132–151.
- Ingold, T. 2000b. To journey along a way of life: maps, wayfinding and navigation, in Ingold 2000c, 219–242.
- Ingold, T. 2000c. *The Perception of the Environment. Essays in Livelihood, Dwelling and Skill*. London: Routledge.
- James, S. 1999. *The Atlantic Celts*. London: British Museum Press.
- Kearney, R. 2002. *On Stories*. London: Routledge.

- Lawton, I. 1992. *Duggleby Lodge*. Unpublished excavation report, York Survey and Research.
- Manby, T. 1980. Bronze Age Settlement in Eastern Yorkshire, in J. Barrett and R. Bradley (eds), *Settlement and Society in the British Later Bronze Age*, 307–370. Oxford: British Archaeological Reports British Series 83.
- Manby, T. 1985. The Thwing Project, *Yorkshire Archaeological Society Prehistoric Research Bulletin*, 22, 1–13.
- Manby, T. 1986. The Thwing Project, *Yorkshire Archaeological Society Prehistoric Research Bulletin* 23, 1–8.
- Manby, T. 1990. Hillforts in Yorkshire No. 3b: Yorkshire Wolds, *Yorkshire Archaeological Society Prehistoric Research Bulletin* 27, 3–7.
- Mauss, M. 1979. The notion of body techniques, in M. Mauss, *Sociology and Psychology: Essays*, 97–123. London: Routledge.
- Megaw, J.V.S. and Megaw, M.R. 1996. Ancient Celts and modern ethnicity, *Antiquity* 70, 175–181.
- Moorhouse, S. 1972. The Yorkshire Archaeological Register for 1971, *Yorkshire Archaeological Journal* 44, 217–226.
- Morse, M. 1999. Craniology and the adoption of the Three-Age System in Britain, *Proceedings of the Prehistoric Society* 65, 1–16.
- Mortimer, J.R. 1905. *Forty Years Researches in British and Saxon burial mounds of East Yorkshire*. London: A. Brown and Sons.
- Osgood, R. 1999. Britain in the age of warrior heroes, *British Archaeology* 46, <http://www.britarc.ac.uk/ba/ba46/ba46feat.html> (accessed 10/12/02).
- Payne, A. 1998. The use of archaeological magnetic prospection in the exploration of Iron Age hillfort interiors in southern England, *Archaeological Prospection* 3 (4), 163–184.
- Piggott, S. 1958. Native Economies and the Roman Occupation of the North, in I.A. Richmond (ed.), *Roman and Native in North Britain*, 1–27. London: Nelson.
- Pittock, M. 2000. *Celtic Identity and the British Image*. Manchester: Manchester University Press.
- Porter, V. 1991. *Caring for Cows*. London: Whittet Books Ltd.
- Powlesland, D. 1986. Excavations at Heslerton, North Yorkshire, 1978–82, *Archaeological Journal* 143, 53–173.
- Powlesland, D. 1988. Staple Howe in its landscape, in T. Manby (ed.), *Archaeology in Eastern Yorkshire*, 101–107. Sheffield: J.R. Collis Publications.
- Proctor, W. 1855. Excavations at Skipwith, *Proceedings of the Yorkshire Philosophical Society* 1855, 187–189.
- Pryor, F. 1998. *Farmers in Prehistoric Britain*. Stroud: Tempus.

- Rigby, V. 2005. *Pots and Pits: the British Museum East Yorkshire Settlements Project, 1988–1992*. Hull: East Riding Archaeological Society.
- Sahlins, M. 1968. *Tribesmen*. Englewood Cliffs, New Jersey: Prentice Hall Inc.
- Shaw, T. 1970. Methods of earthwork building, *Proceedings of the Prehistoric Society* 336, 380.
- Sheppard, T. 1939. Excavations at Eastburn, East Yorkshire, *Yorkshire Archaeological Journal* 34, 35–47.
- Stead, I.M. 1965. *The La Tène Cultures of East Yorkshire*. Hull: Yorkshire Philosophical Society.
- Stead, I.M. 1968. An Iron Age Hillfort at Grimthorpe, Yorkshire, England, *Proceedings of the Prehistoric Society* 34, 148–190.
- Stead, I.M. 1979. *The Arras Culture*. York: Yorkshire Philosophical Society.
- Stead, I.M. 1986. A group of Iron Age barrows at Cowlam, North Humberside, *Yorkshire Archaeological Journal* 58, 5–15.
- Stead, I.M. 1991. *Iron Age Cemeteries in East Yorkshire*. London: English Heritage Archaeological Report 22.
- Stephens, M.R. 1986. *Devil's Hill, Heselton. Interim Report*. Malton: East Riding Archaeological Research Committee.
- Stoertz, C. 1997. *Ancient Landscapes of the Yorkshire Wolds*. Swindon: RCHME.
- Strathern, M. 1988. *The Gender of the Gift*. Berkeley: University of California Press.
- Thurnham, J. and Davis, J.B. 1865. *Crania Britannica. Delineations and Descriptions of the Skulls of the Aboriginal and Early Inhabitants of the British Islands*. London.
- Tylor, E.B. 1871. *Primitive Culture: Researches into the Development of Mythology, Philosophy, Religion, Language, Art and Custom*. London: John Murray.
- Wacher, J. 1962–6. Excavations at Riplingham, East Yorkshire, *Yorkshire Archaeological Journal* 41, 608–669.
- Wagner, P. 1992. *Late Holocene Environments and Man in East Yorkshire*. Unpublished Ph.D. thesis, University of Sheffield.
- Wagner, P. and Hayfield, C. 1996. From dolines to dewponds: a study of water supplies on the Yorkshire Wolds, *Landscape History* 17, 49–65.
- Watts, L. and Rahtz, P. (eds) 1984. *Cowlam Wold Barrows*. York: York University Archaeological Publications 3.
- Williams, R. 1989. *People of the Black Mountains. 1. The Beginning*. London: Chatto and Windus.
- Worsaae, J.J.A. 1849. *The Primeval Antiquities of Denmark* (transl. W.J. Thoms). London: Parker.

Pitted histories: early first millennium BC pit alignments in the central Welsh Marches

Andy Wigley

Introduction

Pit alignments remain an enigmatic class of archaeological feature despite over four decades of research. Although the majority have been identified through aerial survey as crop- or parchmarks, a small number survive as extant earthworks at higher elevations (Spratt 1993; Barnatt *et al.* 2002). They occur in many parts of the British Isles, with notable concentrations on the Yorkshire Wolds and in the river valleys of the English Midlands, East Anglia and south-eastern Scotland, where conditions favour the formation of cropmarks (Wilson 1978; Waddington 1997). There has been considerable debate over the date, form and function of pit alignments (Miket 1981; Barber 1985; Pickering 1992; Pollard 1996). Most commentators agree that they represented a form of linear boundary that operated at a landscape scale (cf. Wilson 1978; Miket 1981; Barber 1985; Pollard 1996; Giles 2000). In his recent review of the evidence, Waddington (1997, 21) acknowledges that a considerable degree of heterogeneity exists within this class of feature, such that it ‘embraces boundaries of various dates and functions’. He argues that the investigation of pit alignments should be grounded in an approach that views these features in relation to the broader landscape, its development over time and other forms of archaeological and environmental evidence.

This paper considers the previously under-researched concentration of pit alignments that occurs within the central Welsh Marches. Drawing upon the results of my Ph.D. research (Wigley 2002), I argue that, even where excavated examples are rare, a

consideration of how they relate to topography, drainage, and other landscape features can considerably enhance our understandings of them. In turn, these insights can add to our knowledge of the communities that inhabited this region in the early first millennium BC.

Characterising the pit alignments of the central Welsh Marches

Sources and limitations of the evidence

The central Welsh Marches¹ was one of the areas in which Wilson (1978, 4, fig. 1.1) noted the existence of a considerable number of pit alignments. To date 87 examples have been identified, mainly concentrated within the valleys of the upper Severn and its immediate tributaries (Fig. 1; Appendix). The overwhelming majority consist of a single alignment of pits, although a small number of double alignments are known. All have been identified through aerial reconnaissance as cropmarks, and all but five are situated below 150 m OD. This bears out Whimster's (1989, 16) observation that – together with ring ditches, house sites and other 'shallow structures' – pit alignments are usually only seen as cropmarks in this region at lower elevations and under optimum conditions.

The one example that breaks with this pattern – the Wallop Hall pit alignment in western Shropshire – demonstrates that other examples may well exist in similar locations elsewhere in the region. Located on the eastern side of Long Mountain, this monument runs between the heads of two minor stream valleys, across a col on a projecting spur. The landscape setting of the Wallop Hall alignment is similar in many ways to some of the cross dykes on the Long Mynd in central Shropshire, and on the Kerry Ridgeway, which straddles the border between England and Wales. Although Fox (1955) proposed an early medieval date for these monuments, it now seems more likely that they were constructed during the late second or early first millennium BC.² Their landscape settings resemble those of later prehistoric cross dykes elsewhere in southern Britain (Guilbert 1975). In addition, two radiocarbon dates (at two sigma) of 1530–1310 cal. BC and 1500–

1210 cal. BC, from a single piece of charcoal from the pre-bank ground surface beneath the Devil's Mouth cross dyke on Long Mynd, provide a *terminus post quem* for the construction of this boundary (J. Milln and J. Dinn pers. comm.).

Although a more detailed discussion of the cross dykes lies beyond the remit of this paper, the similarities between the settings of these monuments and that of the Wallop Hall alignment suggests two things. First, other pit alignments may await discovery in similar locations elsewhere in the central Marches. Together with a number of outlying examples at lower elevations, this implies that pit alignments originally occurred more widely than the known distribution pattern suggests.

Secondly, pit alignments may have addressed similar concerns to other kinds of linear land boundaries – a role which, as we shall see below, is implied by a number of other factors. It seems likely that some of the pit alignments in the central Marches were originally more extensive than the cropmark evidence suggests. Many stop abruptly at modern field boundaries, and 66 of the 87 alignments (76%) are only visible in one field. A further 15 (17%) are visible in two fields, whilst only 6 (7%) can be distinguished in three or more fields. This suggests that differential conditions in neighbouring plots have a pronounced effect upon the visibility of these features, although aerial survey over a number of years can partially compensate for this. At Four Crosses in north-eastern Powys, for instance, long-term reconnaissance has revealed an extensive pit alignment complex. However, most of the alignments within this region have only been photographed on a few occasions.

Examining the distribution of pit alignments along the upper Severn valley, we can identify five discrete groups (see [Fig. 1](#)):

1. The Llanmynech group
2. The Knockin Heath group
3. The War Brook group
4. The River Tern/Roden group
5. The River Worfe group

The factors affecting the visibility of cropmarks (cf. Riley 1982; Wilson 1983; Whimster 1989) do not explain away this pattern. Distinct 'clusters' of linear boundaries have been noted in other

parts of Britain. For example, Yates (1999; 2001; Bradley and Yates this volume) has recently drawn attention to different groups of linear ditch systems on the gravels of the middle and lower Thames valley, whilst Taylor (2001) has identified several concentrations of pit alignments within the river valleys of the East Midlands. A number of factors now suggest that a similar situation existed in the central Marches.

Dating evidence

It seems likely that many of the pit alignments in this region date broadly to the Late Bronze Age or Early Iron Age, although without any absolute dates it is hard to be more precise. The only excavated evidence comes from Four Crosses (Owen and Britnell 1989). This revealed a series of pits containing gravel fills that appeared to result from an initial rapid erosion of the pit sides, followed by slower secondary silting. No dating evidence was recovered. However, a number of the pit alignments appear to share the same alignment as some of the modern field boundaries in the area. Owen and Britnell contended that these field boundaries might therefore represent the subdivision of a series of much larger land blocks defined by the pit alignments. Since the modern field pattern is much the same as that depicted on an estate map of 1780, they suggest that there 'is a strong implication that the pit alignments are of late medieval or post-medieval date' (*ibid.*, 38).

Other lines of evidence suggest that we can now reject this hypothesis. Upon closer examination, it seems that the correspondence between the two boundary systems at Four Crosses may be coincidental. The evidence from other parts of Britain suggests that modern field patterns occasionally partially preserve the line of much earlier boundary systems (Williamson 1987; Fleming 1988). At present we cannot rule out this possibility altogether at Four Crosses. Nonetheless, we can observe that the correlation between the modern field pattern and the pit alignment complex is not absolute, since four of the alignments are oriented obliquely to modern boundaries. Overall, only 29 of the 87 pit alignments in the central Welsh Marches (33%) share the same alignment as modern field boundaries, eight of which belong to the Four Crosses complex. A further eight (9%) run parallel to modern

boundaries for part of their length, whilst the remaining 50 (58%) are oriented obliquely.

The cropmark evidence indicates that a range of relationships exists between pit alignments and other landscape features. For example, at Isombridge in eastern Shropshire, three separate pit alignments appear to underlie cropmark ridge and furrow. Enclosure occurred early and in 'piecemeal' fashion across much of this county, and many lanes and field boundaries preserve the line of medieval cultivation strips (Kettle 1989). Despite much post-war field amalgamation this can be clearly seen in the area around Isombridge. However, the pit alignments are orientated obliquely to the main axis of the ridge and furrow, and to the modern field boundaries, implying that they are much earlier in date.

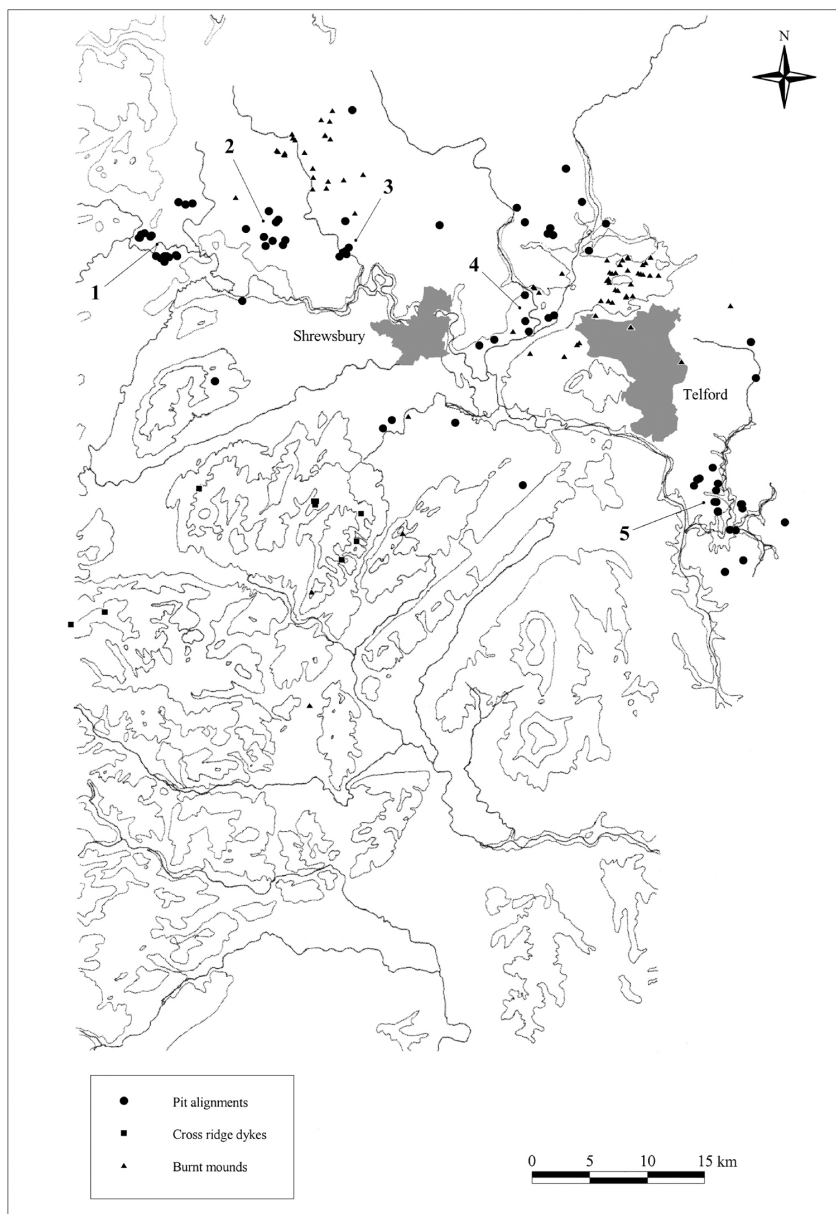


Fig. 1. The distribution of pit alignments in the central Welsh Marches.

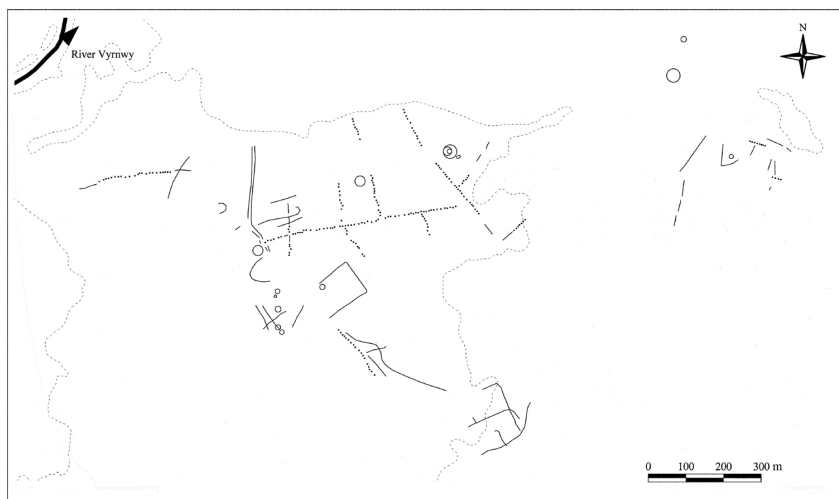


Fig. 2. The Four Crosses pit alignment complex (after Owen and Britnell 1989, fig. 1).

Relationships with ring ditches can also be seen in a number of locations, perhaps the most important of which occurs at Four Crosses itself. Here the main axis of the pit alignment (Appendix, Four Crosses 1) appears to be aligned upon a large ring ditch located on the highest part of the gravel ridge (Fig. 2). Excavation demonstrated that this feature represents the remains of a large round barrow, which appears to have been constructed in the early to mid second millennium BC (Warillow *et al.* 1986). The fact that the Four Crosses 1 alignment seems to have been deliberately oriented on this monument also implies that it is at least contemporary with, or – as seems more likely – later than it. A large post hole in the centre of the ring ditch suggested that a substantial timber post probably projected from the top of the mound. However, even when this had decayed, the size of the mound would have ensured that it remained a prominent feature within the local landscape for a considerable period of time. The scatter of Middle Bronze Age pottery that was found during the excavations may indicate that it became a focus for later burials. This implies that it remained a symbolically significant monument during the later half of the second millennium BC.

Evidence for relationships with ring ditches of a different kind is found elsewhere in the region. The Cotsbrook Farm alignment in

eastern Shropshire appears to run through a cluster of small ring ditches as it cuts across the head of a valley above the floodplain of the River Worfe (Fig. 3). As it climbs out of this shallow depression, the pit alignment passes through two of these ring ditches and appears to change direction slightly as it does so. Similarly, the Moss Plantation pit alignment in central Shropshire also approaches a large ring ditch as it traverses the side of a broad, shallow valley. Crucially, however, this feature appears to *cross* the ring ditch, again changing alignment slightly as it does so.



Fig. 3. The Cotswold Farm pit alignment.

Although without excavation it is difficult to be certain of the exact sequences at these sites, the evidence suggests that in each

case the pit alignments are later than the ring ditches they are oriented upon. This would imply that in some parts of the central Marches, barrow mounds became nodal points in later linear boundary systems. The sequence from Sharpstones Hill Site A, in central Shropshire, lends further support to this suggestion. At this site, two intersecting linear *ditches*, which appear to define part of a wider field system, were cut through the remains of two round barrows (Barker *et al.* 1991). These boundaries were associated with at least one ‘unenclosed’ roundhouse structure. The pottery associated with this phase of activity can be broadly dated to the early first millennium BC.

Close relationships between round barrows and linear boundaries dating to the later second and early first millennia have been observed elsewhere in Britain. A number of the widely discussed linear boundaries on Salisbury Plain are aligned on barrow mounds (Bradley *et al.* 1994). Similar relationships have also been noted between the linear ditch systems and barrows in East Yorkshire (Bevan 1997; Fenton-Thomas 2003; Giles 2000; this volume). Excavation has shown that many of these boundaries were originally dug as pit alignments, with later episodes of re-cutting, which produced a more continuous ditch and bank.

Returning to the central Marches, we can also identify instances where relationships exist between pit alignments and cropmark enclosures, which on morphological grounds probably date to between the fourth century BC and the second century AD. For example, Burrow (1978) identified four pit alignments (called here the Cranmoor Gorse, Stapleton, Dollyfers 1 and Sansaw Heath alignments – see Appendix) that appeared, on the basis of the evidence available at the time, either to cross or avoid cropmark enclosures. Although Burrow argued that these alignments were probably constructed after the enclosures, more recent rectified transcriptions suggest that the evidence is more equivocal. The slight change in the orientation of the Sansaw Heath alignment, for instance, corresponds with the point where it crosses the shoulder of a shallow stream valley. This may just as easily represent a response to a change in the local topography as an attempt to avoid the cropmark enclosure that existed at this location.

Elsewhere, short pit alignments are visible in the vicinity of two

large multivallate cropmark enclosures. For example, the Meoles Meadow Plantation alignment in central Shropshire appears to underlie or adjoin a complex multivallate enclosure (Fig. 4). Significantly, however, there is a noticeable ‘kink’ in the enclosure boundaries close to the point where they intersect with the pit alignment, suggesting that their course may have been influenced by a pre-existing feature. Likewise, at the Osbaston enclosure in north-west Shropshire, a very short length of pit alignment (not included in the Appendix) runs between two of the outermost entrance ditches. It appears to be on a different axis from the enclosure entrance and does not continue beyond either of the enclosure ditches. This may imply that it represents an earlier feature obscured by later activity. Although not conclusive, the evidence from both of these sites implies that at least some of the pit alignments in the central Marches may pre-date the cropmark enclosures of the later first millennium BC.

Taking these various points together, it appears that some of the pit alignments in this region post-date the barrows of the late third and early second millennia and pre-date the enclosures of the later first millennium. Although on the information currently available it is difficult to be more precise at present,³ the evidence from Sharpstones Hill Site A suggests that some at least may belong to the earlier first millennium BC. Similarly, the morphology of the pits at Four Crosses conforms to Waddington’s criteria (1997, 30, table 1) for pit alignments of this date (i.e. closely spaced rectangular– ovoid pits that were usually left to fill naturally).

Relationships to topography and drainage

In order to situate the pit alignments in the central Welsh Marches within a broader landscape context, it is necessary to consider how they were set out in relation to topography and drainage. There are two reasons for this. First, to determine whether similarities can be identified in the ways in which the different alignments were laid out in relation to the local terrain. Secondly, to examine how these features may have operated as boundaries, thus offering us some insight into the forms of tenure that existed at the time they were constructed.

It is possible to envisage a range of ways in which these features

might relate to topography and drainage ([Table 1](#)). By characterising each pit alignment in relation to these it has been possible to build up a more detailed picture of the way in which they were set out in the landscape.

Pit alignments and the lie of the land

This analysis implies that a series of ‘conventions’ apply throughout the central Marches. For instance, many alignments run *away* from a watershed, either perpendicular (28 examples; 32%) or at an oblique angle (18 examples; 21%) to the contours. Twelve examples (14%) *cross* a watershed, whilst a further seven (8%) run *along* a watershed. In addition, 21 pit alignments (24%) run parallel to the contours.

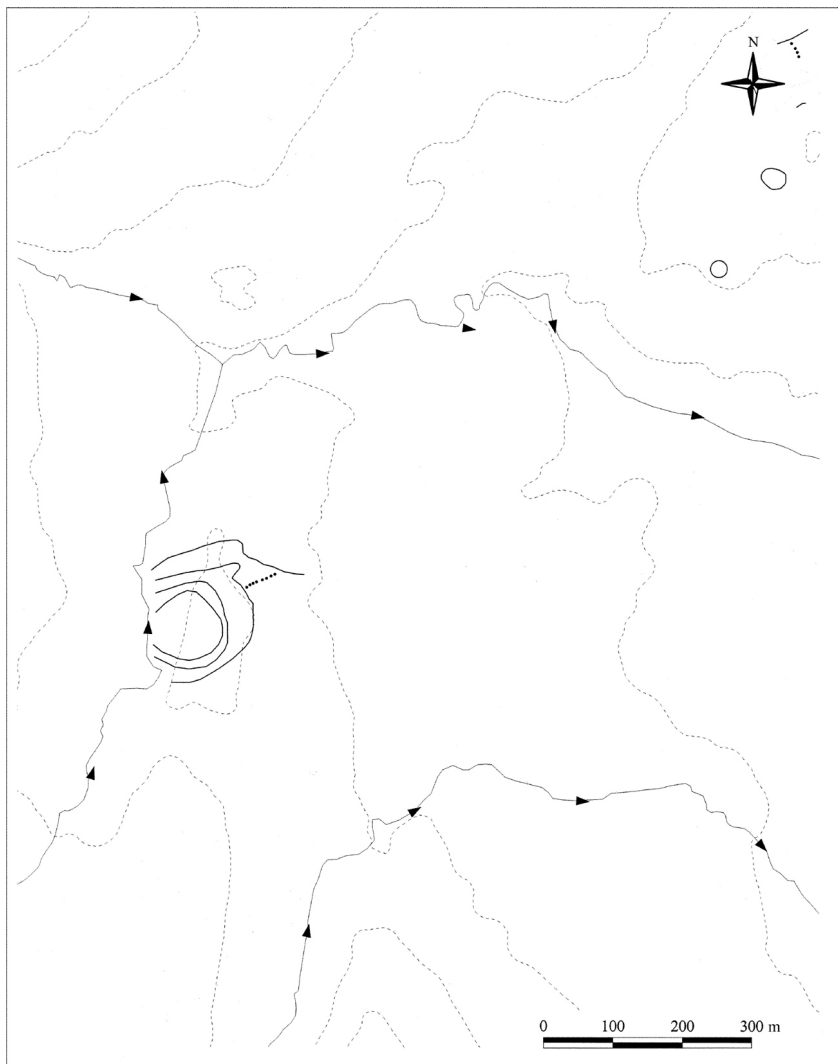


Fig. 4. The Meoles Meadow Plantation pit alignment and multi-ditched enclosure.

There is often a strong concern with watercourses and springs. Twenty three alignments (26%) were orientated *toward* the head of a valley, whilst a further six (7%) actually ran *between* the heads of two valleys. In addition, 25 examples (28%) approached a watercourse at a perpendicular angle and a further 11 pit alignments (13%) ran parallel to a river or stream.

Examples of these relationships to topography and drainage can be found within each of the different groups of pit alignments, again suggesting that they are broadly similar in date and address a related set of concerns. In addition, the way in which alignments appear to run between the heads of valleys is reminiscent of the cross-ridge dykes in the region. The Wallop Hall alignment, which offers the clearest illustration of this point, has already been discussed. The Highway Farm pit alignment in north-eastern Shropshire provides another example. This feature runs for nearly 650 m across a low gravel ridge, between the heads of a small valley containing a streamlet to the west and a shallow dry valley utilised by a modern road to the east.

<i>Variable</i>	<i>Category</i>	<i>Sub-category</i>	<i>Description</i>
Height	1		50–100m
	2		101–150m
	3		151–200
	4		>200m
Relationship to topography	1	A	Runs <i>along</i> a watershed/axis of ridge
		B	Runs <i>along</i> a watershed/axis of ridge and aligned upon a landscape feature
	2	A	Runs <i>across</i> a watershed/axis of a ridge and aligned upon a landscape feature
		B	Runs <i>across</i> a watershed/axis of a ridge and aligned upon a landscape feature
	3	C	Crosses an area of level ground at an oblique angle
		A	Runs away from a watershed/axis of a ridge at a perpendicular angle to the contours
	4	B	Runs away from a watershed/axis of a ridge at a perpendicular angle to the contours and aligned on a landscape feature
		A	Runs <i>away</i> from a watershed/axis of a ridge at an oblique angle to the contours
	5	B	Runs <i>away</i> from a watershed/axis of a ridge at an oblique angle to the contours and aligned on a landscape feature
		A	Runs parallel with the contours
	6	B	Runs parallel with the contours and aligned upon a landscape feature
		A	Runs over an area of raised relief
		B	Runs between areas of raised relief
Relationship to drainage	1	A	Runs parallel to a river/stream channel
		B	Runs perpendicular to a stream channel
	2	A	Aligned upon the head of a valley
		B	Runs between valley heads
	3	C	Runs across the head of a valley
			Runs along a watershed
	4		Aligned upon another water source
	5		No apparent relationship with drainage

Table 1. Categories used in the analysis of the relationship between pit alignments, topography and drainage in the central Welsh Marches.

Pit alignments as land boundaries

Exactly how functionally effective pit alignments were as land boundaries has been a subject of considerable debate (see Waddington 1997 for a review of the arguments). The waterlogged fills of the Iron Age pit alignment at St Ives in Cambridgeshire preserved twigs, which suggested it might have been associated with a hedge (Pollard 1996). Similarly, many of the pit alignments that have been investigated elsewhere in Britain appear to have been re-cut as linear ditches, suggesting an ongoing concern with maintaining them as land boundaries.

The effectiveness of a row of pits as a barrier to stock has, however, been questioned. Some have suggested that they may have been as much symbolic as practical boundaries. For instance, recent excavations of another Iron Age pit alignment, at Gardom's Edge on the East Moors of Derbyshire, revealed a series of pits that had been lined with clay (Barnatt *et al.* 2002). Since these features had been cut through poorly drained clays, the excavators suggest that this might indicate a ritualised concern with retaining water.

Functionality and symbolism may not have been mutually exclusive concerns. As we have seen, many of the pit alignments in the central Welsh Marches appear to draw attention to sources of water. At Four Crosses, for example, the pit alignments approach the course of the River Vrynwy at a near right angle. However, the fluvio-glacial gravels through which they had been cut would not have retained water, except perhaps in the wettest depths of the winter. It seems likely that these alignments were intended to define a series of land parcels, which would have provided access to both the wetter soils on the floodplains and the fertile brown earths on the gravel ridge. In this sense, the complex makes a number of references to water sources but also addresses a range of more prosaic concerns.

Similar patterns can be seen elsewhere. However, the way in which pit alignments within each of the groups work together to achieve a division of the landscape is subtly different in each case. For instance, the alignments in the Llanymynech (which includes the Four Crosses alignments) and the Tern/Roden groups were cut across gently sloping gravel river terraces. They often run toward floodplains at a right angle to the watercourses, suggesting that they

were intended to permit access to a range of different soils and resources.

This contrasts with the River Worfe group. In this area, there are a number of similarities in the ways in which individual pit alignments relate to the topography. However, the way in which they work together to divide up the land is significantly different. The catchment of the River Worfe is characterised by a series of shallow steep-sided gorges cut through a rolling sandstone plateau. The floors of these depressions are occupied by the floodplain of the Worfe and its tributaries and they remain poorly drained today. Gullies and coombs also line their sides, giving them a slightly serrated quality. Before modern ground-water extraction for intensive arable cultivation lowered the water table, these features may have contained springs and streamlets. Many are still occupied by roads or rights of way that run down onto the floors of the gorges. The pit alignments occupy the higher ground between them and many run across watersheds or the axis of a ridge (six examples). There is also a strong trend toward orientation upon the heads of gullies or coombs (11 examples). Thus, they appear to demonstrate a concern with dividing up the light sandy soils on the plateau, whilst controlling access to the pastures that probably existed in the floodplains below. In other words, they address a similar set of concerns to the Llanymynech and Roden/Tern groups but in a way that is intimately related to the local topography.

The pit alignments within the other groups operate in similar but equally distinctive ways. Overall, the intention appears to have been to define and control access to a spectrum of resources, although this was achieved in a way that reflected localised patterns of relief and drainage. This situation has clear parallels with boundary systems of Late Bronze Age–Early Iron Age date elsewhere. For instance, Bradley *et al.* (1994, 141) note that many of the extensive linears on Salisbury Plain ‘emphasise the alignment of the main ridge and watersheds’, often approaching water courses at a near right angle. Again, this may well reflect a concern with maintaining access to a range of different areas within the landscape.

Summary

Taking the various lines of evidence together, it seems that the ways in which pit alignments were set out in the landscape is closely comparable across the central Welsh Marches. They would have emphasised the lie of the land, calling attention to the principal sources of water and defining rights of access to a variety of resources. Significantly, however, the ways in which the pit alignments within the different 'clusters' worked together to achieve such a division of the landscape appears to have been subtly different in each case. In other words, the ways in which the landscape was bounded and, by implication, the way that the movement of people through the landscape was structured, seems to have varied from one area to another. This has important implications for our understanding of the different communities that inhabited this region in the earlier first millennium BC.

Discussion

Pit alignments and the definition of tenure and community identity

As elsewhere in Britain, it seems likely that each of the different concentrations of alignments in the central Marches formed a focus for a different community (Yates 1999; Taylor 2001). Sharpstones Hill Site A is currently the only known residential locale of early first millennium BC date in the region, but *if* the evidence from there holds good elsewhere, it suggests that people may have dwelt amongst these boundaries in dispersed clusters of roundhouses. If so, the small groups that inhabited these structures were probably bound to their neighbours by ties of kinship and affiliation, since it is unlikely that they were either materially or biologically or sustainable in isolation (Barrett 1989). As Fleming (1985; 1989) has argued in relation to the co-axial boundary systems on Dartmoor, this may have resulted in the emergence of 'neighbourhood groups': social units whose sense of identity was based around shared locality and close kinship ties. These networks of social relations would have been cemented through co-operation in agricultural tasks, such as ploughing and gathering in the harvest, which took place in the fields around the dwellings. By working the land in these ways, such groups also reproduced their tenurial claims over

particular areas (Barrett 1994).

Yet these practices would have been framed by a wider architecture constituted by the pit alignments and other linear boundaries, suggesting that control over the land rested at a different level. Some alignments run for considerable distances across the landscape and in many cases they work together to divide up fairly extensive areas. Although truncated by later ploughing, most of the pits excavated at Four Crosses extended to a depth of 0.5–1 m below the surface of the gravel subsoil, suggesting that they would have been substantial features when first dug (Owen and Britnell 1989). A considerable amount of labour was evidently expended in the construction of pit alignments, which undoubtedly exceeded the capacity of individual neighbourhood groups. It seems likely that these projects brought together larger numbers of people, perhaps drawn from several such social units.

Whether such projects were instigated by an elite or resulted from a more corporate level of decision-making is open to question. However, we do have some evidence as to how this communal labour was organised. Excavation of a section of one of the alignments at Four Crosses revealed a group of five smaller pits that appeared to be sandwiched between much larger examples (Fig. 5). Similar groupings were found along a double pit alignment dating to the early–mid first millennium BC at St Ives, Cambridgeshire, where Pollard (1996, 100) argued that they represented evidence of gang-working.

This may suggest that the representatives of different groups laboured together side-by-side, each perhaps assuming responsibility for a separate stretch of the earthwork. Participation in these projects would in turn have extended and reworked the social ties that existed between different elements of the community. The creation of these boundaries altered people's sense of community identity, as they attempted to come to terms with the different scales of social relations they were engaged in (Giles 2000). At the same time, participation in such undertakings would also have reproduced these communities' tenure over the land (see also Giles this volume; Sharples this volume).

Much more work is required before we can determine whether the alignments within each of the different groups were laid out at

the same time or in piecemeal fashion. Indeed this question forms the subject of a wider debate about the temporality of prehistoric land boundaries. Initially, discussion centred around Fleming's (1985; 1988; 1989) highly influential work on the co-axial reave systems of Dartmoor. He argued that these complexes were a largely synchronic development, resulting from a single decision taken by the whole community:

‘the decision to lay out a coaxial field system is a very radical one... because of the interdependence of such boundaries, and indeed the economic activities carried out within them, they would have to come into operation as simultaneously as possible’ (Fleming 1989, 74–5).

At Four Crosses, the fills in each of the pits suggest that once they had been dug, they were left quietly to silt up and the whole system has a co-axial quality (Owen and Britnell 1989). Yet this does not necessarily equate to synchronicity of construction. Excavations of the linear ditches on Salisbury Plain and in East Yorkshire have demonstrated that the apparent coherence of these boundary systems when viewed from the air is deceptive (Bradley *et al.* 1994; Giles 2000; this volume). Many of the individual earthworks that make up these networks have extended histories of building and reworking. The sensitivity that many of the pit alignments within the central Marches show to the local topography suggests that these boundary systems never achieved the apparent level of terrain-oblivious coherency shown by the large-scale complexes on Dartmoor. Similarly, at Four Crosses and elsewhere some alignments appear to continue as cropmark ditches, perhaps indicating that in some cases these features had more protracted histories. Such episodes of reworking may have required the community to come together on a periodic basis, thus creating the conditions whereby such group identities could be sustained.

The palaeoenvironmental evidence from the central Welsh Marches provides us with further insight into the historical conditions that gave rise to these kinds of social relations. Dated pollen sequences from the wetlands of northern Shropshire (Beales 1980; Twigger and Haslam 1991; Leah *et al.* 1998) and Buckbean Pond on the summit of the Breiddin (Smith *et al.* 1991) suggest that

the pit alignments were constructed within a landscape that had been transformed by an increase in clearance activity. By the early first millennium BC, a mosaic of woodland and larger clearings appears to have given way to more open conditions. In combination with the emergence of more permanent cultivation plots, this would have promoted a series of highly complex changes in the nature of the region's soils.

The removal of forest cover from the floodplains would also have altered the hydrology of the river systems. Evidence from a number of places in the upper and middle Severn basin suggests that this may have resulted in an increase in over-bank flow and alluviation around the turn of the first millennium BC (Brown 1988; Taylor and Lewin 1996; 1997). Such changes in the structure of the landscape would have created a series of new resources (e.g. larger areas of open land, rich floodplain pastures), which in turn would have promoted the emergence of new forms of routine practice. Barrett has argued that the appearance of formal land division in many parts of Britain in the later second and early first millennia BC suggests a concern with 'the long-term control of resources by particular communities, and the means by which that control was passed from one generation to the next' (Barrett 1999a, 497). In this sense, pit alignments would have represented one means by which communities could strategically redefine their tenure over certain parts of the landscape.

In part, these transformations would have been the product of the ways in which the pit alignments were constructed. However, examining the ways in which these features were set out in the landscape suggests that they would have emphasised communal control of the land in other areas of practice. The relationships between pit alignments, and relief and drainage within each of the different groups suggests that many alignments highlighted natural routeways. By so doing, they probably formalised well-established rights of access to different parts of the landscape. Giles (2000; this volume) has made similar comments concerning the linear boundaries of East Yorkshire. In this region, excavations have revealed patterns of wear along some of the ditches, suggesting that some of these features were used as trackways. Giles contends that the construction of these boundaries monumentalised a set of long-

standing patterns of movement around the landscape, thus placing certain forms of tenurial control beyond the level of casual negotiation.

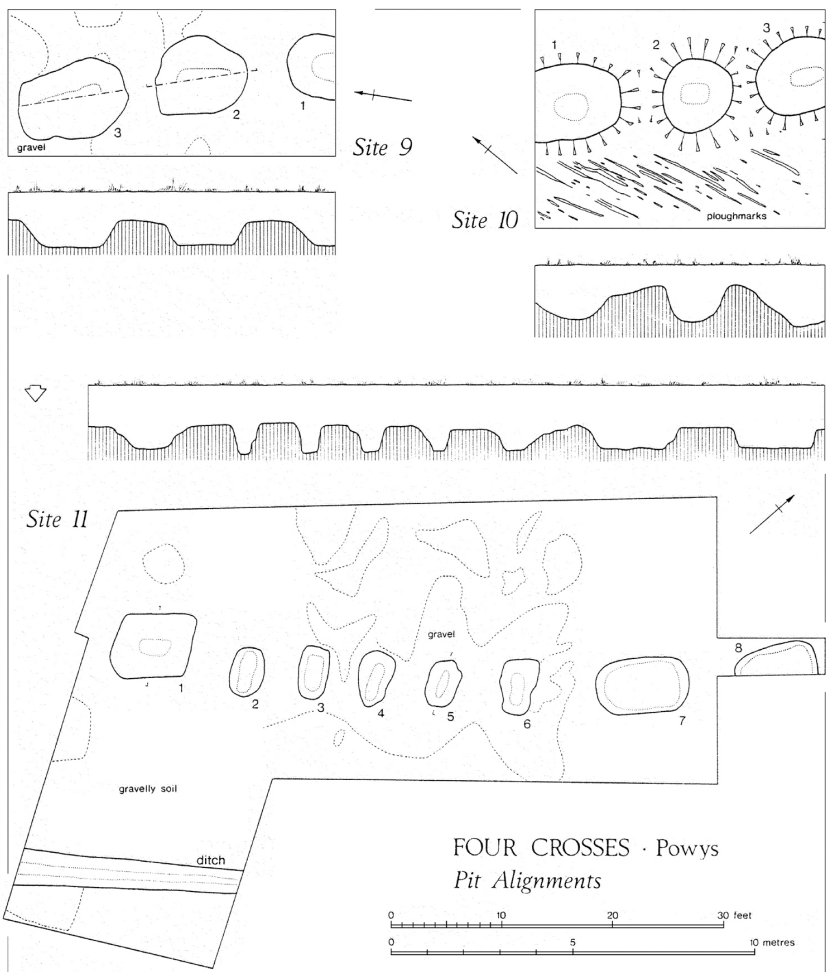


Fig. 5. Plan of the excavated sections of the Four Crosses pit alignment complex (source: Owen and Britnell 1989, fig. 2).

The pit alignments in the central Welsh Marches may well have operated in a similar manner, structuring movement around the landscape during the course of routine activity. The differences between the ways in which a division of the landscape was achieved within each group of alignments may have been particularly

significant in this respect. They suggest that subtle variations existed in the ways people moved around within each these areas. If the construction of these features was one means by which a sense of community identity was generated, then these different patterns of movement may well have helped to reproduce a whole series of distinct community identities on a day-to-day basis.

Pit alignments, politics and the past

Since pit alignments represented one means by which communities could rework their control over the land, we should acknowledge that these features had a strong political dimension. By emphasising certain patterns of movement others were necessarily played down, such that the laying out of these boundaries would almost certainly have favoured the rights of some over those of others. In addition, the reciprocal relations that the provision of labour for these projects may have helped to sustain would have provided a medium for competition between different groups (Sharples this volume). Whilst at one level the construction of these features brought the community together, these projects would also have drawn subtle distinctions between different individuals and interest groups. Similarly, as Bradley *et al.* (1994, 141) have argued of linear boundaries on Salisbury Plain, the variations that exist between each cluster of alignments suggest that statements were also being made about the differences that existed between groups that inhabited separate parts of the landscape. In this sense, pit alignments not only drew attention to the differences between various parts of the landscape but also highlighted the distinctions that existed between people.

The ways in which some of these boundaries related to the physical traces of the past would have added to the potency of the political meanings they carried. The continuing importance of earlier monuments in the landscapes of the first millennium BC is now widely recognised (e.g. Bradley 1993; Gosden and Lock 1998; Barrett 1999b; Hingley 1999; Giles 2000; Bradley 2002). As we have already seen, a number of relationships between pit alignments and burial mounds of the late third and second millennia BC can be identified in the central Welsh Marches. These are important not only as dating evidence, but also because they

inform us about the ways in which a series of different community histories were sustained.

At Four Crosses, for instance, a deliberate attempt appears to have been made to respect the numerous ring ditches that occur at various points along the low gravel ridge. Many of the land blocks that the pit alignments define contain one of these monuments, whilst the main axis appears to have been aligned upon one of the largest (and one of the latest) ring ditches in this area. In this sense, the whole pit alignment complex at Four Crosses was draped over these earlier landscape features, perhaps in an attempt to root the very dramatic changes in social relations that their construction would have heralded in the distant past. Elsewhere in the region the decision appears to have been taken to appropriate such monuments in a different way. The evidence suggests that both the Cotsbrook Farm and the Moss Plantation alignments were dug through the remains of earlier burial mounds, such that these features were physically incorporated into the course of the new boundaries.

As we have already seen, both kinds of relationships have parallels beyond the Marches. Bradley *et al.* (1994, 184) suggest that the way in which many of the Salisbury Plain linear ditches were aligned upon round barrows may indicate that ‘the incorporation of the dead from an earlier period’ was an important factor in their construction. Similarly, Giles (2000; this volume) argues that the use, and occasional destruction, of barrow mounds during the laying out of the boundary systems in East Yorkshire may have reiterated the claims of particular groups to certain areas.

How persistent the practice of constructing pit alignments was in the central Welsh Marches is difficult to determine at present. Nonetheless, some of these boundaries may have survived in the landscape for a considerable period of time. It seems possible, given their size, that the pits at Four Crosses remained open for some time, whilst other alignments may have been re-cut as more continuous ditches. Low banks and/or hedgerows could also have accompanied some or all of them (cf. Pollard 1996). Certainly, the excavated evidence from a number of ‘farmstead’ enclosures dating to the later first millennium BC suggests their boundaries were laid out in relation to earlier earthworks (Barker *et al.* 1991; Stanford

1995; Hunn 2000).

Pit alignments in the wider landscape

Finally, we should note that the character of the archaeological evidence changes significantly in the areas beyond the main clusters of pit alignments. For instance, the overwhelming majority of the Middle and Late Bronze Age metalwork from the central Welsh Marches seems to have been deposited in the areas beyond the main groups of these boundaries. The distribution pattern of this corpus of material overlaps significantly with that of burnt mounds, which occur in two distinct concentrations within this region. Equally, a number of the hillforts that have produced evidence for activity dating to the earlier first millennium BC also appear to be located on the fringes of some of the larger clusters of pit alignments.⁴

Whilst a detailed exploration of these patterns is inappropriate here, they certainly imply that a different range of practices occurred beyond the bounded parts of the landscape. For example, the two main groups of burnt mounds occur around the fringes of two large valley mire systems known as the Weald Moors and the Baggy Moor complex.⁵ Palaeoenvironmental evidence from the latter site indicates that these areas may have supported damp woodland throughout later prehistory (Brown 1990), thus providing a significant contrast with the more open areas in which the pit alignments were located. Ethnohistorical evidence from the temperate woodlands of North America suggests that the habitats around the edges of such areas would have been particularly rich (Cronon 1983). In the central Marches they may have offered a seasonal abundance of resources including grazing land and game animals to which many different groups probably maintained rights of access. The burnt mounds (and indeed the concentrations of metalwork) located around the margins of the valley mires may result from the activities that enabled such claims to be maintained. In addition, they probably brought the members of different communities into contact with one another, creating the conditions under which a wider series of social ties could be created.

Conclusion

The pit alignments of the central Welsh Marches form a major

category of evidence relating to the later prehistory of this region. Although at present under-studied, the investigation of these features should form an integral part of future research on the developments that took place here and elsewhere in the earlier first millennium BC. As this paper has sought to demonstrate, analysing the landscape setting of such boundaries can offer us a range of insights into the nature of the communities that built them. Constructed through shared labour, at a scale that encompassed larger areas than those inhabited by individual ‘neighbourhood’ groups, the pit alignments would have helped people to sustain a sense of communal identity on a day-to-day basis. Tending these boundaries and the land around them would also have reproduced such units’ rights of tenure over particular parts of the landscape. Because they regulated access to the different resources these areas offered, they played a central role in the social relations that held such groups together.

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Notes

1. Defined for the purposes of this study as comprising the whole of the modern administrative areas of Shropshire and Telford and Wrekin, together with parts of south-eastern Wrexham, north-eastern Powys, northern Herefordshire and south-eastern Staffordshire.
2. Fox (1955) examined a number of the cross-ridge dykes in the Welsh Marches as part of his great survey of Offa’s Dyke. He argued that they were an early precursor to the Dyke, such that they formed part of his ‘Mercian Frontier’. Although he described this proposal as a ‘working hypothesis’ (*ibid.* 114), many later commentators have taken this

notion as fact (Guilbert 1975 is a notable exception).

3. The difficulty of dating later prehistoric linear boundaries, including those which have been excavated, is widely acknowledged (cf. Fleming 1987; 1989; Bradley *et al.* 1994). Only a carefully planned programme of investigation of the pit alignments in the central Marches will yield more precise details of their chronology.

4. The Breiddin (Musson 1991), the Wrekin (Kenyon 1942; Stanford 1984), and Old Oswestry (Varley 1948; Hughes 1994).

5. A radiocarbon date (at two sigma) of 1390–1080 cal. BC has been obtained from a burnt mound at Rodway in eastern Shropshire (Hannaford 1999). This falls within the range of late second to early first millennia dates obtained from such sites elsewhere in the West Midlands.

Appendix: Details of the pit alignments in the central Welsh Marches

Key:

* = double alignment

The categories are explained in [Table 1](#).

<i>SMR PRN</i>	<i>Name of monument</i>	<i>Map ref.</i>	<i>Group</i>	<i>Height OD</i>	<i>No. of fields cropmarks are visible in</i>	<i>Relationship to modern field boundaries</i>	<i>Relationship to topography</i>	<i>Relationship to drainage</i>
02243	Barkers Square 1	SJ 586135	4	1	1	Parallel	5B	1A
02243	Barkers Square 2	SJ 586135	4	1	1	Parallel	5A	1A
02454	Baschurch	SJ 429222	3	1	2	Oblique	1B	2A
00143	Berwick Wharf	SJ 546114	4	1	1	Oblique	6A	5
02271	Bolas House 1	SJ 655220	4	1	1	Oblique	1B	3
02271	Bolas House 2	SJ 655220	4	1	1	Oblique	6A	2A
02204	Bradney 1	SO 768953	5	1	1	Parallel	4A	2B
02204	Bradney 2	SO 763953	5	1	2	Oblique	4A	2B
P 38027	Carraghofa 1 (Ty-gwyn)	SJ 256211	1	1	2	Parallel	1A	1B & 3
P 02454	Carraghofa 2	SJ 253210	1	1	3	Oblique	6A	1B
	(Carraghofa Farm 1)							
P 38025	Carraghofa 3 (Penarth)	SJ 251207	1	1	1	Oblique	4B	1B
P 38025	Carraghofa 4 (Penarth II)	SJ 252207	1	1	1	Oblique	4B	1B
02388	Coney Bank 1	SJ 375201	2	1	1	Oblique	5A	5
04212	Coney Bank 2	SJ 377205	2	1	3	Oblique	3B	2A
02361	Cotsbroom Farm	SJ 748008	5	1	2	Partly parallel	5B	2C
02201	Cranmere S 1	SO 753970	5	1	2	Oblique	2A & 6A	5
02201	Cranmere S 2	SO 373969	5	1	1	Oblique	2A	2A
02100	Cranmoor Gorse	SJ 369220	2	1	1	Oblique	4B	4
03713	Crickheath 1	SJ 285238	1	1	1	Partly parallel	6A	1B
03713	Crickheath 2	SJ 291236	1	1	2	Partly parallel	6A	1B
04145	Crickheath 3	SJ 297237	1	1	1	Parallel	1A	5
00431	Crowgreaves	SO 753994	5	1	1	Partly parallel	5A	2C
00051	Dollyfers 1	SJ 559119	4	1	1	Oblique	3A	1B
00051	Dollyfers 2	SJ 559119	4	1	1	Oblique	3A	1B
02191	Echoes Hill 1	SO 737998	5	1	1	Oblique	2A	1A
02192	Echoes Hill 2	SO 735997	5	1	1	Oblique	5A	1A
02193	Echoes Hill 3	SO 732992	5	1	1	Parallel	5A	1A
02259	Ellerdine 1	SJ 605211	4	1	1	Oblique	5A	5
02270	Ellerdine 2	SJ 607216	4	1	1	Non	3A	5
04477	Ellerdine 3	SJ 610210	4	1	1	Parallel	1A	5
02202	Folley 1*	SO 774976	5	1	2	Oblique	2A	2A
02202	Folley 2	SO 773976	5	1	1	Oblique	2B	2B
02203	Folley 3	SO 774972	5	1	1	Oblique	5A	2C
02318	Forge Plantation	SJ 786086	5	1	1	Parallel	5B	1A
P 06077	Four Crosses 1	SJ 266191	1	1	2	Parallel	5A	1A
P 38100/ P 50518	Four Crosses 2	SJ 270189	1	1	3	Oblique	1B	1A
P 38107	Four Crosses 3	SJ 274191	1	1	2	Partly parallel	2A	1B
P 38101	Four Crosses 4	SJ 271189	1	1	1	Parallel	3A	1B
P 38101	Four Crosses 5	SJ 271189	1	1	1	Parallel	3A	5
P 38103	Four Crosses 6	SJ 272190	1	1	1	Parallel	3A	1B
P 38029	Four Crosses 7	SJ 273191	1	1	2	Parallel	3A	1B
P 38106	Four Crosses 8	SJ 272189	1	1	1	Parallel	3A	5
P 31826	Four Crosses 9	SJ 274190	1	1	1	Parallel	3A	5

<i>SMR PRN</i>	<i>Name of monument</i>	<i>Map ref.</i>	<i>Group</i>	<i>Height OD</i>	<i>No. of fields cropmarks are visible in</i>	<i>Relationship to modern field boundaries</i>	<i>Relationship to topography</i>	<i>Relationship to drainage</i>
P 50521	Four Crosses 10	SJ 273186	1	1	1	Parallel	4A	5
P 38109	Four Crosses 11	SJ 277190	1	1	1	Oblique	4A	5
P 38104	Four Crosses 12	SJ 275191	1	1	2	Oblique	4A	1B
P 38124	Four Crosses 13	SJ 283192	1	1	1	Oblique	4A	5
P38124	Four Crosses 14	SJ 284191	1	1	1	Oblique	4A	5
02301	Highway Farm	SJ 635239	4	1	3	Parallel	2B	2B
02353	Isombridge 1	SJ 606137	4	1	1	Oblique	5B	1A
02355	Isombridge 2	SJ 611140	4	1	1	Oblique	3A	1A
02355	Isombridge 3	SJ 611140	4	1	1	Oblique	3A	1A
04225	Knockin Hall	SJ 342215	2	1	1	Oblique	2A	2B
04031	Knockin Heath 1	SJ 366204	2	1	1	Oblique	6A & 2B	3
04254	Knockin Heath 2	SJ 360200	2	1	1	Parallel	3B	2A
04345	Knockin Heath 3	SJ 358208	2	1	1	Parallel	3B	2A
02464	Llanymynch 1 (Walls Bridge)	SJ 261208	1	1	2	Oblique	4B	5
02464	Llanymynch 2 (Walls Bridge)	SJ 262209	1	1	1	Oblique	3A	1B
02845	Lower Farm Shotatton	SJ 363230	2	1	1	Parallel.	5B	2A
4920	Meoles Meadow Plantation	SJ 462042	—	2	1	Oblique	3B	2A
02251	Merry Lane	SJ 511218	—	1	1	Parallel	3B	1B
3964	Moss Plantation	SJ 372223	2	2	2	Oblique	4B	5
00486	New Pools Plantation 1	SJ 432199	3	1	1	Oblique	3A	1A
02065	New Pools Plantation 3	SJ 429195	3	1	2	Oblique	5B	1A
02065	New Pools Plantation 3	SJ 429195	3	1	1	Partly parallel	3A	1B
04156	New Pools Plantation 4	SJ 430193	3	1	1	Parallel	3B	1B
04449	New Pools Plantation 5	SJ 427194	3	1	1	Oblique	5B	1B
04450	New Pools Plantation 6	SJ 424191	3	1	2	Oblique	4B	5
00628	Newfoundland 1	SO 584992	—	1	1	Oblique	4B	2A
00628	Newfoundland 2	SO 584992	—	1	1	Oblique	4B	2A
N/A	Pentre Farm	SJ 340152	—	1	1	Oblique	4A	1B
02319	Pickmoor Wood	SJ 781117	5	1	1	Oblique	5B	2A
01006	Pikes End Moss	SJ 435318	—	1 & 2	1	Oblique	1A	2A
02315	Pitchford Hall	SJ 525047	—	1	1	Oblique	5A	1B
00600	Pool House	SJ 585221	4	1	1	Parallel	5A	5
04390	Rodenhurst Hall	SJ 585157	4	1	1	Oblique	5A	1B
00434	Sandybank Plantation	SO 759917	5	1	1	Partly parallel	4B	2A
04488	Spoonleygate	SO 811960	5	1	1	Parallel	3B	2A
02198	Stableford	SO 751988	5	1	1	Parallel.	2B	2A
02269	Stanton upon Hine Heath*	SJ 578233	4	1	3	Partly parallel	4B	2A
02196	Stapleton	SJ 469049	—	2	1	Oblique	3B	2A
02200	The Bog 1	SO 751977	5	1	1	Parallel	3B	2A
?	The Bog 2	SO 750978	5	1	1?	Oblique	3B	4
00044	The Lees	SJ 589126	4	1	1	Parallel	6A	1B
04387	Wallop Hall	SJ 316082	—	4	1	Oblique	2B	2B
04475	Waters Upton	SJ 641196	4	1	1	Oblique	2C	5
02303	Weobley	SJ 621267	4	1	3	Oblique	3B	2A
02091	Woundale	SO 775927	5	2	1	Parallel	1B	2A

Bibliography

- Barber, J. 1985. The pit alignment at Esbank Nurseries, *Proceedings of the Prehistoric Society* 51, 149–166.
- Barker, P.A., Haldon, R. and Jenks, W.E. 1991. Excavations on Sharpstones Hill near Shrewsbury, 1965–71, *Transactions of the Shropshire Archaeological and Historical Society* 67, 15–57.
- Barnatt, J., Bevan, B. and Edmonds, M. 2002. Gardom's Edge: a landscape through time, *Antiquity* 76, 50–56.
- Barrett, J. 1989. Food, gender and metal: questions of social reproduction,

- in M.L.S. Sørensen and R. Thomas (eds), *The Bronze Age–Iron Age Transition in Europe: Aspects of Continuity and Change in European Societies c. 1200 to 500 B.C.*, 305–320. Oxford: British Archaeological Reports International Series 483.
- Barrett, J. 1994. *Fragments From Antiquity*. Oxford: Blackwell.
- Barrett, J. 1999a. Rethinking the Bronze Age environment, *Journal of Quaternary Science* 14, 493–500.
- Barrett, J. 1999b. Mythical landscapes of the British Iron Age, in W. Ashmore and B. Knapp (eds), *Archaeologies of Landscape*, 253–265. Oxford: Blackwell.
- Beales, P.W. 1980. The late Devensian and Flandrian vegetational history of Crose Mere, Shropshire, *New Phytologist* 85, 133–161.
- Bevan, B. 1997. Bounding the landscape: place and identity during the Yorkshire Wolds Iron Age, in A. Gwilt and C. Haselgrove (eds), *Reconstructing Iron Age Societies*, 181–191. Oxford: Oxbow Monograph 71.
- Bradley, R. 1993. *Altering the Earth*. Edinburgh: Society of Antiquaries of Scotland.
- Bradley, R. 2002. *The Past in Prehistoric Societies*. London: Routledge.
- Bradley, R., Entwistle, R. and Raymond, F. 1994. *Prehistoric Land Divisions On Salisbury Plain*. London: English Heritage Archaeological Report 3.
- Brown, A.G. 1988. The palaeoecology of *Alnus* (alder) and the Postglacial history of floodplain vegetation. Pollen percentages and influx data from the West Midlands, United Kingdom, *New Phytologist* 110, 425–436.
- Brown, A.G. 1990. Holocene floodplain diachronism and inherited downstream variations in fluvial processes: a study of the river Perry, Shropshire, England, *Journal of Quaternary Science* 5, 39–51.
- Burrow, I.C.G. 1978. Air photography and Shropshire archaeology: an interim statement in 1978, *Aerial Archaeology* 2, 64–68.
- Cronon, W. 1983. *Changes in the Land: Indians, Colonists, and the Ecology of New England*. New York: Hill and Wang.
- Fenton-Thomas, C. 2003. *Late Prehistoric and Early Historic Landscapes on the Yorkshire Chalk*. Oxford: British Archaeological Reports British Series 305.
- Fleming, A. 1985. Land tenure, productivity, and field systems, in G. Barker and C. Gamble (eds), *Beyond Domestication in Prehistoric Europe: Investigations in Subsistence Archaeology and Social Complexity*, 129–146. London: Academic Press.
- Fleming, A. 1987. Coaxial field systems: some questions of time and space, *Antiquity* 61, 183–202.
- Fleming, A. 1988. *The Dartmoor Reaves: Investigating Prehistoric Land*

Division. London: Batsford.

- Fleming, A. 1989. The genesis of coaxial field systems, in S.E. van der Leeuw and R. Torrence (eds), *What's New? A Closer Look at the Process of Innovation*, 63–81. London: Unwin Hyman.
- Fox, S.C. 1955. *Offa's Dyke: a Field Survey of the Western Frontier-Works of Mercia in the Seventh and Eighth Centuries A.D.* London: The British Academy.
- Giles, M. 2000. *Open-weave, Close-knit: Archaeologies of Identity in the Later Prehistoric Landscape of East Yorkshire*. Unpublished Ph.D. thesis, University of Sheffield.
- Gosden, C. and Lock, G. 1998. Prehistoric histories, *World Archaeology* 30, 2–12.
- Guilbert, G. 1975. Ratlinghope/Stitt Hill, Shropshire: earthwork enclosures and cross-dykes, *Bulletin of the Board of Celtic Studies* 26, 363–373.
- Hannaford, H. 1999. A Bronze Age burnt mound at Rodway, Telford, *Transactions of the Shropshire Archaeological and Historical Society* 74, 67–74.
- Hingley, R. 1999. The creation of later prehistoric landscapes and the context of the re-use of Neolithic and earlier Bronze Age monuments in Britain, in B. Bevan (ed.), *Northern Exposure: Interpretative Devolution and the Iron Ages in Britain*, 233–251. Leicester: Leicester Archaeology Monograph 4.
- Hughes, G.W. 1994. Old Oswestry hillfort: excavations by W.J. Varley 1939–40, *Archaeologia Cambrensis* 143, 46–61.
- Hunn, J.R. 2000. Hay Farm, Eardington, Shropshire: an Iron Age and Romano-British Enclosure, in R.J. Zeepvat (ed.), *Three Iron Age and Romano-British Rural Settlements on English Gravels*, 119–144. Oxford: British Archaeological Reports British Series 312.
- Kenyon, K.M. 1942. Excavations on the Wrekin, Shropshire, 1939, *Archaeological Journal* 99, 99–109.
- Kettle, A. 1989. 1300–1540, in G.C. Baugh (ed.), *The Victoria History of the County of Shropshire*, Vol. 4: *Agriculture*, 72–118. Oxford: Oxford University Press.
- Leah, M.D., Wells, C.E., Stamper, P., Huckerby, E. and Welch, C. 1998. *The Wetlands of Shropshire and Staffordshire*. Lancaster: North West Wetlands Survey 5.
- Miket, R. 1981. Pit alignments in the Milfield Basin and the excavation of Ewart 1, *Proceedings of the Prehistoric Society* 47, 137–146.
- Musson, C.R. 1991. *The Breiddin Hillfort. A Later Prehistoric Settlement in the Welsh Marches*. London: Council for British Archaeology Research Report 76.

- Owen, G. and Britnell, W. 1989. Pit Alignments at Four Crosses, Llandysillio, Powys, *Montgomeryshire Collections* 77, 27–40.
- Pickering, J. 1992. Pit alignments, *Current Archaeology* 130, 417–419.
- Pollard, J. 1996. Iron Age riverside pit alignments at St. Ives, Cambridgeshire, *Proceedings of the Prehistoric Society* 62, 93–115.
- Riley, D.N. 1982. *Aerial Archaeology for Archaeologists*. London: Shire.
- Smith, A.G. with Girling, M.A., Green, C.A., Hillman, G.C. and Limbrey, S. 1991. Buckbean Pond: Environmental Studies, in Musson 1991, 95–112.
- Spratt, D.A. 1993. *Prehistoric and Roman Archaeology of North-East Yorkshire* (revised edn). York: Council for British Archaeology Research Report 87.
- Stanford, S.C. 1984. The Wrekin hillfort: excavations 1939, *Archaeological Journal* 141, 61–90.
- Stanford, S.C. 1995. A Cornovian farm and Saxon cemetery at Bromfield, Shropshire, *Transactions of the Shropshire Archaeological and Historical Society* 70, 95–141.
- Taylor, J. 2001. Earlier Iron Age landscape evolution across Central England. Paper presented at the Durham Earlier Iron Age seminar.
- Taylor, M.P. and Lewin, J. 1996. River behaviour and Holocene alluviation: the River Severn at Welshpool, Mid-Wales, U.K., *Earth Surface Processes and Landforms* 21, 77–91.
- Taylor, M.P. and Lewin, J. 1997. Non-synchronous response of adjacent floodplain systems to Holocene environmental change, *Geomorphology* 18, 251–264.
- Twigger, S.N. and Haslam, C.J. 1991. Environmental change in Shropshire during the last 13,000 years, *Field Studies* 7, 743–758.
- Varley, W.J. 1948. The hillforts of the Welsh Marches, *Archaeological Journal* 105, 41–66.
- Waddington, C. 1997. A review of ‘pit alignments’ and a tentative interpretation of the Milfield complex, *Durham Archaeological Journal* 13, 21–33.
- Warrilow, W., Owen, G. and Britnell, W. 1986. Eight ring-ditches at Four Crosses, Llandysillio, Powys, 1981–85, *Proceedings of the Prehistoric Society* 52, 53–87.
- Whimster, R. 1989. *The Emerging Past*. London: Royal Commission on the Historical Monuments of England.
- Wigley, A. 2002. *Building Monuments, Constructing Communities: Landscapes of the First Millennium BC in the Central Welsh Marches*. Unpublished Ph.D. thesis, University of Sheffield.
- Williamson, T. 1987. Early co-axial field systems on the East Anglian boulder clays, *Proceedings of the Prehistoric Society* 53, 419–431.
- Wilson, D.R. 1978. Pit Alignments: distribution and function, in H.C. Bowen

and P.J. Fowler (eds), *Early Land Allotment*, 3–6. Oxford: British Archaeological Reports British Series 29.

Wilson, D.R. 1983. *Aerial Reconnaissance for Archaeology*. London: Council for British Archaeology Research Report 12.

Yates, D. 1999. Bronze Age field systems in the Thames Valley, *Oxford Journal of Archaeology* 18(2), 157–170.

Yates, D. 2001. Bronze Age agricultural intensification in the Thames Valley and Estuary, in J. Brück (ed.), *Bronze Age Landscapes: Tradition and Transformation*, 65–82. Oxford. Oxbow Books.

Environmental evidence from the Iron Age in north central Britain: putting archaeology in its place

Jacqueline P. Huntley

Whilst not ignoring social and political pressures, it is true to say that the environment does play a significant role in what can and cannot be grown or raised successfully in any particular landscape. In a subsistence-based economy, relying upon crops as opposed to natural resources, the environment is crucial. Inappropriate crops will fail and this leads to starvation. As cultures become less subsistence-based, and social structures develop in complexity, there may therefore be associated changes in use of the landscape, for example some areas may concentrate more upon arable cultivation and others more on animal husbandry. The Iron Age clearly was such a period of developing social complexity and environmental material relating to sites of this period may thus contribute to our interpretation of this complexity.

This paper presents the environmental evidence from both pollen and plant macrofossils from sites lying essentially between the Rivers Tees and Forth in north central Britain. Evidence for past environments is acquired from two main sources: the analysis of pollen surviving in, principally, natural deposits which have built up over time in bogs, mires, and lakes; and the analysis of biological material recovered during archaeological excavations, namely plant remains, animal bones, and invertebrate remains. Each dataset will be reviewed in turn.

The evidence from pollen

Pollen analyses provide information about the vegetation growing

around the site of deposition with biases depending heavily upon the nature and size of basin (Jacobson and Bradshaw 1981; Sugita 1993), as well as many other factors associated with the plant species themselves (Moore *et al.* 1991). Such biases are well recognised within the palynological world but have not been well quantified, although efforts were made by, for example, Erdtman (1969) to calculate settling velocity of pollen grains, as well as pollen production of tree species. Andersen (1970) likewise produced such 'pollen productivity' indices for common tree taxa, although these differed widely from those of Erdtman.

Since these classic pieces of work in the 1960s and 1980s, it seems to have been agreed in the pollen world that there are simply too many unquantifiable variables at work – from the time that pollen is produced in an anther to when it is deposited on the surface of a bog – to produce clear and definitive models for the interpretation of pollen diagrams. Nonetheless such biases must be considered, albeit intuitively or subjectively, during that interpretative process.

The possibilities of using traditional pollen diagrams to answer economic questions, such as cereal production and so on, remain somewhat limited (cf. Huntley 2000a). Such diagrams are constructed from cores taken generally from the centres of bogs, mires or lakes in order to minimise the effect of very local vegetation. They are thus likely to have been somewhat remote from fields in which cereals and other crops were being grown. Taken with the fact that cereal pollen travels only very short distances from source, its values are rarely significant in any diagram. Taking cores from the edges of lowland basins leads to potential problems of disturbance and re-working of the sediments through water running off from adjacent land and poaching by animals coming to drink, for example.

In addition, the Late Bronze Age and Iron Age are still within the period when many of the northern upland and marginal contemporary peats have been removed subsequently through cutting for fuel. The time taken to count the necessary 1000 or so land pollen grains required to produce reliable proportions/counts of cereal pollen, plus that needed to determine such grains to more than 'Cerealia-type' means that very careful matching of pollen site

and archaeological question is essential from the outset of any research.

For the most part it remains true that pollen diagrams produced largely to answer broad-scale questions such as ‘vegetation changes through the Holocene in lowland Durham’ are all that is available even in the twenty-first century. There have been plenty of studies addressing the ‘problem’ of the effect that the Romans had in the Tyne–Solway region (e.g. Tipping 1997), but temporal resolution, and indeed precision of dating, of any diagram remains limiting.¹

Nonetheless, north central Britain has seen many hundreds of pollen diagrams produced. Due to the research interests of Professor W. Pennington and Dr J. Turner and their co-workers, north-east England and north-west England are particularly well represented, but the number of diagrams from southern Scotland is increasing (e.g. Tipping 1995; 1997). The wealth of material from Durham and Northumberland made an enviable start to a doctoral thesis investigating settlement and land-use from the Neolithic to AD 500 in the Tyne–Tees region (Pratt 1996). In all, Pratt was able to use pollen data from a total of 180 cores – just under 20% of which have radiocarbon dated levels – from 149 separate locations spread through the region. She interpolated these data at 500 year intervals to compile a series of isopoll maps, which she then used to visualise broad-brush changes in specific taxa over time (*ibid.*).

Figure 1 presents re-drawn maps for selected taxa covering the period from c. 2000 cal. BC to cal. AD 70 and demonstrates some of the questions that may be asked of such regional pollen diagrams. As discussed above, the proportions of specific pollen types do not necessarily represent the proportions of those types of plant in the landscape, but give only an indication. Thus the figure can be said to show that tree pollen types gradually decrease from the Early Bronze Age until the end of the Iron Age, with major clearance in the southeast of the area from about 1500 BC.

By the Later Iron Age there are hints of increased woodland. This might indicate lessening impact of people, but conversely it might reflect a deliberate policy of people to increase woodland for building timber and fuel supplies. A third option is that it may reflect local growth of, for example, wet alder woodlands on or near to the coring site; if so, locally produced pollen would play a greater

role in the overall picture and the trees could have the effect of filtering out more pollen from further afield. More detailed interpretation would need to examine the individual pollen types that make up the tree taxa, as well as the nature of the deposits themselves, and, if possible, the macrofossils preserved within those deposits. It is the macrofossils that will provide evidence for the plants growing immediately around the coring site. The low values for tree pollen in the west of the region are generally mimicked by increasing values in Ericaceae – plants of the heathlands characteristic of the upland and acidic soils and peats of that area – and possibly reflect more of natural climatic changes than the effects of people.

A different approach was taken by Tipping in his summary of pollen data for dated diagrams across Scotland as a whole (Tipping 1994), and in southern Scotland in particular (Tipping 1997). Rather than the broad-brush interpolation of Pratt (vegetation picture at specific periods of time), he used the actual pollen values (what changes happened when). He established that the lowland areas were largely dominated by a mixture of oak, hazel and elm woodland, as was the case in northern England, until the Neolithic, after which clearances started to become apparent. He demonstrated the evidence for almost synchronous increases in woodland clearance, both in the highlands and the lowlands, from about 2000–1800 BC, but noted that ‘the apparent small extent of these forest openings does not imply widespread colonisation, and clearings may at this time have remained discrete around still isolated farmsteads’ (*ibid.*). Indeed, such a short period of time is beyond the resolution of Pratt’s analysis.

Tipping’s data, as well as earlier studies (e.g. Wilson 1983), suggest that the extent and scale of clearance increased markedly at c. 200–100 cal. BC over much of north central Britain. This previously unprecedented opening up of the landscape is seemingly reflected in the regional settlement record. Later Iron Age sites far outnumber those of earlier date, although the extent to which this disparity is an artefact of the much greater archaeological visibility of the enclosed settlements that characterise the later period remains a matter for discussion (Haselgrove 2002; Ralston and Ashmore this volume).

That taking pollen work to an even finer spatial resolution is both achievable and feasible is seen in Tipping's detailed geomorphological and palynological work elsewhere in the Cheviots (Tipping 1992). Here he investigated a series of sites in the Bowmont Water, College Burn, Harthope Burn, and River Breamish catchments which all flow north into, first, the River Till and then into the River Tweed. The pollen sites were generally small and therefore fell into the local to extra-regional catchments of Jacobson and Bradshaw's (1981) model.

Tipping's data clearly show some patterns of variation from one valley to the next (Fig. 2). Sourhope shows the earliest evidence for clearance and this probably reflects early mixed farming in the valley. Camp Hill Moss and Yetholm Loch both show later clearance and it is suggested that they reflect a more regional pattern because of their larger size. As Tipping reports, the high altitude site on Swindon Hill 'appears not to reflect in its entirety... the period of "mixed" farming' that is represented at the Sourhope site. For the three sites at relatively low altitudes (below 270 m OD) cereal pollen is recorded more or less continuously from about 2300–2200 BP; none is recorded in the Swindon (365 m OD) summary curve at all.

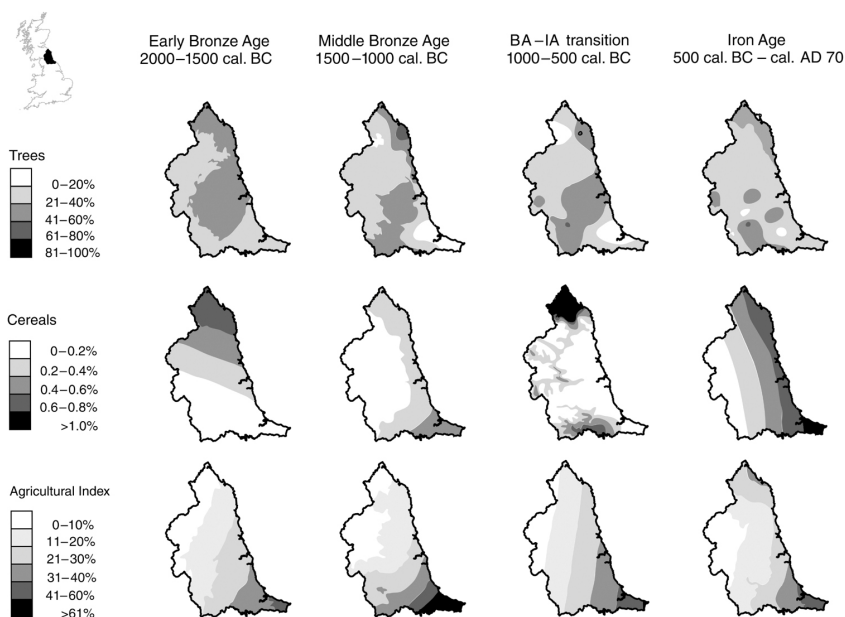


Fig. 1. Isopoll maps with interpolated pollen data (after Pratt 1996)

This picture of spatially sporadic farming occurs throughout prehistory in the west of the region, for example on the Solway coast, as demonstrated in Tipping (1995). This is not however apparent if we return to the regional scale, and the west remains reasonably wooded until at least the Roman period (Huntley 1999). In comparison, at Hutton Henry, a small basin in lowland County Durham, pollen determined that the area had been cleared fairly extensively from as early as about 3800 BP (Bartley *et al.* 1976). Thus, by undertaking further fine spatial resolution pollen work, always within the precision of radiocarbon dating, of course, it should be possible to make inferences as to detailed land use patterns, especially when considered in conjunction with data derived from landscape survey and settlement excavation.

In most pollen diagrams, cereal values are two orders of magnitude lower than those for trees. The second row of plots in [Figure 1](#) presents these cereal data. In the Early Bronze Age, there is strong evidence for cereal cultivation in north-east Northumberland, around the Milfield Basin. Although most of the sites used in Pratt's interpolation for the relevant period are from the southern part of her region (35), there are seven from the northern area, so the isopoll lines are not totally dependent upon one or two, perhaps atypical, sites. Nonetheless, the site at Trickley Wood (Turner 1968) does have very high cereal pollen records – reaching more than 1% total land pollen. Of more recent interest is that charred cereals grains have been recorded at several archaeological sites within the Milfield Basin (cf. Huntley and Stallibrass 1995), although never in abundance. As many of these sites relate to monumental structures this could be argued as unsurprising.

The isopoll maps show an increase in amounts of cereal types in the south-east of the region during the Middle Bronze Age, with rather little in the northern area. The northern area becomes highly significant again in the Later Bronze Age and Earlier Iron Age, with the southern block also intensifying. In the later first millennium BC, there is general cereal cultivation all along the coastal strip, with values gradually declining inland. These quite dramatic changes would fit with the model of accelerating intensification of clearance proposed by Tipping (1994), but whether they are real or

relate to rather specific aspects of the particular cores analysed is not, however, especially clear. They do, nonetheless, allow discussion and hypotheses to be raised that could then be tested by sampling appropriate sites and undertaking pollen analyses at both fine spatial and temporal resolution as discussed above. Clearly the Milfield Basin is one area where these hypotheses could be tested.

As stated above, there are problems with cereal pollen curves. Some relate to the production and dispersal of the pollen itself, but others relate to total numbers of pollen grains traditionally counted (at best even today normally 500 TLP), and whether the analysts have made concerted and consistent attempts to identify these larger Gramineae grains. Not only will cereals have been grown, but other crops too and these produce even less pollen or less identifiable pollen, e.g. legumes. In addition, animal ‘crops’ reared by the oft-quoted ‘Celtic cowboys’ were long considered the norm for the north – Iron Age people managed stock rather than grew crops. Thus, from the 1960s to the 1980s, a fair amount of attention was given to devising pollen indicators that might distinguish between arable and pastoral activities. Many of these have been produced and are fully discussed by Pratt (1996, Vol. 2, 119, especially table 5.3).

The fundamental problem is that, whilst the phytosociology of communities representing different types of pasture or arable field today is well defined (Rodwell 1991a; 1991b; 1992; 1995; 2000), we still do not know the pollen signatures of those communities, let alone the combinations of species which might have been growing together in the past but no longer have modern analogues. A further hindrance to the establishment of any indices is the level of taxonomic identification possible for the pollen of many families and that many pollen taxa might therefore include representatives of either or both arable or pastoral activities.

Fenton-Thomas (1992) sought to circumvent some of these problems by looking at the proportion of taxa which are at least somewhat unequivocally arable in relation to all of the taxa which suggested some kind of agricultural activity, thus producing an ‘arable-agricultural’ indicator. Pratt (1996) took the same taxa and interpolated for the whole of her region; the third row of plots in [Figure 1](#) presents these data. What is particularly striking is the lack

of any suggestion of what might be called the Milfield basin activity in either the Early or the Late Bronze Age. Pratt notes that the index values actually decrease during the Early Bronze Age, which is generally considered a period of increased activity, arguing that this decrease is a result of 'massive increase in *Plantago lanceolata* and *Rumex* (both 'pastoral-type' indicators) which swamp out the increase in arable pollen types' (*ibid.* Vol. 1, 284).

Thus it might arguably be best to look at the individual curves of each agricultural taxon until such time as the necessary fundamental research on the relationship between pollen and landscape has been undertaken. Looking for patterns in data as detailed as pollen should not, these days, be as difficult as previously, given the ready availability of powerful computer video tools – a 'movie' of maps such as those presented in [Figure 1](#) for all agricultural taxa may not become a box office hit, but could be of great value in interpreting patterns of change!

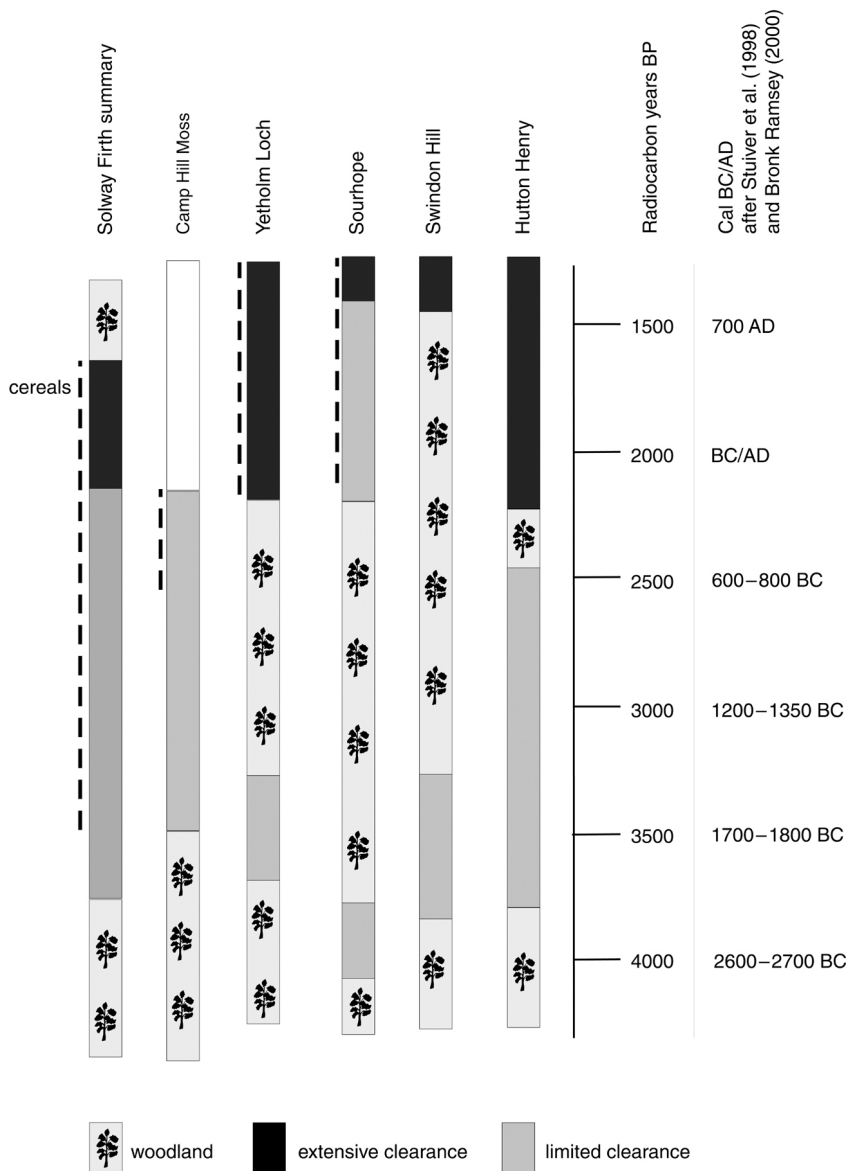


Fig. 2. Summary of clearance episodes from selected northern pollen diagrams (Solway Firth summary drawn from Tipping 1995; Camp Hill Moss, Yetholm Loch, Sourhope, and Swindon Loch after Tipping 1994; Hutton Henry derived from data in Bartley et al. 1976).

In summary, the pollen evidence suggests fairly intensive, albeit local, cereal cultivation in the Tyne–Tees region in the Early Bronze

Age with a subsequent shift in focus to the south-east of the study area in the Middle Bronze Age. After a further 500 years, Northumberland, at least, again becomes an area of cereal concentration, with cereal cultivation subsequently spreading through the lowlands during the Later Iron Age. Agricultural activity *per se* tends to display a general increase in intensity from south-east to north-west throughout the 2000 or so years under consideration, with intensification in the Middle Bronze Age. With woodland clearance *relatively* steady throughout the period, i.e. no major changes in total tree pollen values, it may be that the early cereal cultivation was highly local and that the pollen sites just happened to be well chosen. Certainly, when local-scale work has been undertaken, there is good evidence for patchiness of cultivation, perhaps at least in part reflecting some kind of crop rotation or the moving of cultivation around the landscape as soils became less fertile.

The other biological evidence

Other biological evidence comes primarily from plant remains, animal bones and invertebrates. It is disappointing to have to say that for most of the first millennium BC in northern England, the picture has changed little from that of a decade ago when Huntley and Stallibrass (1995) published their regional review of plant and vertebrate remains. Animal bones tend not to survive on the predominantly acidic soils of northern England and, combined with few excavations of the relevant period or ‘useful’ type, e.g. of settlements, it is not surprising that few extra data have been produced. Invertebrates still remain inadequately sampled or analysed, although fundamental work by specialists upon survival in aerobic conditions is required.

Few deposits of the period under discussion in the region have anaerobic preservation. Where they do exist, they have yielded highly valuable assemblages of invertebrates. At Flodden in the Milfield Basin, Northumberland, Clive Waddington (forthcoming) excavated a rectilinear enclosure ditch, at the bottom of which was waterlogged sediment. The plant remains showed a dominance of ruderal taxa – nettles, docks, sow thistles – suggesting a vegetation fairly typical of nutrient-enriched but not heavily used areas.

Present however in the invertebrate assemblage is the nettle beetle, whose current northern limit of distribution is Kent; for it to survive in Northumberland today, a temperature increase of 1–2°C would be necessary (Kenward 2000). This ditch deposit is radiocarbon dated to the early Roman Iron Age, strongly implying that the climate two thousand or so years ago was warmer than today. Supportive invertebrate evidence for a slightly warmer climate at the start of the first millennium AD comes from both Carlisle (Kenward forthcoming), and from the Late Iron Age complex at Stanwick, North Yorkshire (Wheeler 1954, 27; 58). A warmer climate, of course, will have had an effect on the potential for cereal cultivation at higher altitudes and also possibly associated cultural effects.

Plant macrofossils, especially those preserved through being charred, can provide detailed evidence both of the cereals being grown and the processing or husbandry being practised. In northern England, several more Late Iron Age settlements have been investigated in the last few years, mainly through developer-funded interventions. The majority of excavations have, however, been small-scale, with rather few environmental samples, and – as between the 1970s and 1995 – the sites investigated have largely been concentrated in the lowlands south of the Tyne.

From the limited data produced by these excavations, the crop husbandry practices at the sites are mostly similar to Thorpe Thewles (Van der Veen 1987): hulled 6-row barley and spelt wheat are the dominant cereals; and weed seeds and chaff fragments abound, suggesting that the inhabitants were probably producing their crops in local fields. An exception is the site at Newton Bewley, Hartlepool, where samples from Late Iron Age to earlier Roman features suggest that more fully processed material was being discarded, as very few weed seeds or cereal chaff were recovered (Cotton 2000). This may relate to the context types of course, or may reflect the rather poor preservation conditions, as suggested by the 80% indeterminable cereal grains.

Current evidence suggests that most of the sites in question developed in the Later Iron Age (cf. Haselgrove 2002), with none, to the author's knowledge, producing earlier material. So where were people living in north central Britain in the Late Bronze Age and

Earlier Iron Age? With the pollen evidence for active cereal cultivation throughout these periods, there must have been settlement that has either not survived or not yet been found. Some settlements may conceivably survive under the blanket peat that developed during the Later Bronze Age as the climate became wetter, but that could only account for sites at higher altitudes where, arguably, people may not have been living in the earlier period. Elsewhere, either we are still looking in the wrong places, or, more probably, the nature of Earlier Iron Age settlements makes them more difficult to recognise in small-scale interventions.

Within the wider region under consideration, one of the relatively few sites with plentiful – and independently dated – evidence of Iron Age crop husbandry is Fishers Road, Port Seton, beside the Firth of Forth in East Lothian (Haselgrove and McCullagh 2000; Ralston and Ashmore this volume). Two adjacent enclosure complexes were excavated and intensively sampled for botanical remains, 283 samples being analysed from Fishers Road West (Miller *et al.* 2000) and 256 from Fishers Road East (Huntley 2000b). The dating evidence suggests that the western site was occupied from the fourth or third centuries BC until the start of the first millennium AD, whereas the main period of activity at the eastern site lay between the second century BC and the second century AD.

Overall, the Port Seton samples were dominated by barley, mostly the 6-row hulled variety but including a small amount from a naked variety. Emmer, spelt, and bread wheat were all present but, from the chaff, the indications were that emmer dominated until the final stages of occupation at Fishers Road East, when the proportion of spelt did finally rise (Huntley 2000b, 170). As elsewhere, most of the cereal evidence post-dates 300 cal. BC, but ten cereal samples have calibrated radiocarbon dates that could fall earlier: six of hulled barley and one each of naked barley and of emmer, spelt and (interestingly) bread wheat (Haselgrove and McCullagh 2000, 28; 127). Weed seeds, especially those indicating wet ground, were abundant, although some of these may well represent the use of turf on the site and are not necessarily representative of arable weeds.

Within the archaeobotanical community there is an understanding that naked barley was superseded by hulled varieties

in the earlier first millennium BC, but the nature of this switchover (whether abrupt or gradual), the geographical location, and the reasons for it are widely discussed. The problem is that few sites have been excavated which cover the whole of the period under discussion, let alone been excavated with extensive sampling or production of charred botanical assemblages.

Port Seton is probably the nearest that has yet been achieved in the area under discussion and there are, indeed, suggestions of naked barley decreasing with time; at Fishers Road West, excluding the 'grain pit', almost 5% of the barley was naked, whereas at Fishers Road East, just over 1% was naked. The general scenario of emmer wheat and barley otherwise ties in well with Van der Veen's (1992) work on the differences in crop husbandry between north and south of the River Tyne.

Although lying outside the main area under discussion, excavations at Lairg, in north-east Scotland, had a major input from palaeoenvironmental and soil micromorphological studies (McCullagh and Tipping 1998). Pollen from basins close to excavated houses provided strong evidence for local cereal production. Charred material from the houses themselves seems to consist largely of cereal grains rather than much chaff or other seeds, and the interpretations presented suggest that much of this material represented a cleaned crop; unfortunately not even summary data tables are presented in the publication. Weed taxa present suggested the presence of well manured soils, and an intensive subsistence type of farming was proposed (*ibid.*). As at Port Seton there are changes in the types of barley recorded, with the naked form being predominant up to about 1000 BC and the hulled form in Iron Age deposits. Wheat is rare at Lairg and probably reflects climatic factors with the site being too far north for successful ripening of wheat.

Another recent investigated site is from the diagonally opposite end of the region under discussion: at Irby, on the Wirral in north-west England. Here, 163 samples were analysed, 34 of them dating from the Later Bronze Age to the Iron Age (Huntley 2002). The assemblages from these prehistoric samples were dominated by a mixture of emmer wheat and naked barley, as evidenced from both grain and chaff. The naked barley formed over 90% of all the barley

grains identified. What is especially unusual at this site are the low levels of spelt wheat through the Late Iron Age and into the Roman period when, from other sites in northern England south of the Tyne, spelt would be expected to have been dominant.

Conclusions

Thus in summary, the pollen evidence suggests that widespread farming was taking place in the north of England and lowland Scotland, as well as further north, through much of the Bronze Age and Earlier Iron Age, although major and extensive clearance of the woodlands did not occur until the later Iron Age. Cereal pollen attests to some arable agriculture and no doubt pastoral activities were also common, although there are few instances of bone surviving to discuss animal husbandry. The only significant bone assemblage comes from the Later Iron Age settlement at Thorpe Thewles in the Tees lowlands (Rackham 1987). The assemblage from the earlier enclosed farmstead consisted predominantly of cattle bones, but the shift to open settlement in the first centuries BC and AD saw a sharp increase in the slaughter of more juvenile animals. Sheep and pig also became proportionally more important in this later phase. It was suggested that the community either became more specialised cattle breeders exporting stock on the hoof elsewhere, or that they intensified beef production themselves (*ibid.*).

A synthesis of bone reports for northern central Britain, taking into account both recoding methodologies and some taphonomic factors, also emphasises the importance of cattle at least for the Later Iron Age (Hambleton 1999). The charred plant remains are consistent – as far as can be determined from the limited number of data sets available – in indicating that naked barley was replaced by hulled barley at some time during the Later Bronze Age.

Wheat cultivation reflects an environmental influence, in that it is absent from northern Scotland. In southern Scotland and the Wirral, emmer seems to have remained the principal wheat crop into the early centuries AD, echoing the picture found by Van der Veen (1992) on the Iron Age sites that she examined in Northumberland. The weed taxa present suggest high nutrient levels in the soils and thus probably intensive farming. The patchiness of cultivation in the

landscape is especially reflected in suitably chosen pollen basins; where present near to settlements, these should be targeted together with those settlements, for finer-scale investigations. The problem for the Earlier Iron Age especially seems to be to find those settlements!

Note

1. See the correspondence about this in *The Holocene* 7 (1997).

Bibliography

- Andersen, S.T. 1970. The relative pollen productivity and pollen representation of North European trees and correction factors of tree pollen spectra, *Danmarks Geologiske Undersøgelse* 96, 1–99.
- Bartley, D.D., Chambers, C. and Hart-Jones, B. 1976. The vegetational history of parts of south and east Durham, *New Phytologist* 77, 437–468.
- Cotton, J. 2000. *Newton Bewley, Hartlepool, HNB98. Plant Macrofossil Analysis*. Durham: Archaeological Services University of Durham Report 729.
- Erdtman, G. 1969. *Handbook of Palynology, Morphology, Taxonomy, Ecology*. Copenhagen: Munksgaard.
- Fenton-Thomas, C. 1992. Pollen analysis as an aid to the reconstruction of patterns of land-use and settlement in the Tyne-Tees region during the first millennia BC and AD, *Durham Archaeological Journal* 8, 51–62.
- Hambleton, E. 1999. *Animal Husbandry Regimes in Iron Age Britain. A Comparative Study of Faunal Assemblages from British Iron Age Sites*. Oxford: British Archaeological Reports British Series 282.
- Haselgrove, C. 2002. The later Bronze Age and the Iron Age in the lowlands, in C. Brooks, R. Daniels and A. Harding (eds), *Past, Present and Future: the Archaeology of Northern England*, 49–69. Durham: Architectural and Archaeological Society of Durham and Northumberland Research Report 5.
- Haselgrove, C. and McCullagh, R. (eds) 2000. *An Iron Age Coastal Community in East Lothian: the Excavation of two Later Prehistoric Enclosure Complexes at Fishers Road, Port Seton, 1994–5*. Edinburgh: Scottish Trust for Archaeological Research Monograph 6.
- Heslop, D.H. 1987. *The Excavation of an Iron Age Settlement at Thorpe Thewles, Cleveland, 1980–1982*. London: Council for British Archaeology Research Report 65.
- Huntley, J.P. 1999. Environmental evidence from Hadrian's Wall, in P.

- Bidwell (ed.), *Hadrian's Wall 1989–1999*, 48–64. Carlisle: Cumberland and Westmorland Antiquarian and Archaeological Society and the Society of Antiquaries of Newcastle upon Tyne.
- Huntley, J.P. 2000a. Late Roman transition in the north: the palynological evidence, in T. Wilmott and P.R. Wilson (eds), *The Late Roman Transition in the North. (Papers from the Roman Archaeology Conference, Durham 1999)*, 67–72. Oxford British Archaeological Reports British Series 299.
- Huntley, J.P. 2000b. The charred plant remains, in Haselgrove and McCullagh 2000, 157–176; appendix 16, 254–270.
- Huntley, J.P. 2002. Irby, the Wirral: the charred plant remains from prehistoric to 4th century AD samples. London: Centre for Archaeology Report 31/2002.
- Huntley, J.P. and Stallibrass, S.M. 1995. *Plant and Vertebrate Remains from Archaeological Sites in Northern England: Data Reviews and Future Directions*. Durham: Architectural and Archaeological Society of Durham and Northumberland Research Report 4.
- Jacobson, G.L. and Bradshaw, R.H.W. 1981. The selection of sites for palaeoecological studies, *Quaternary Research* 16, 80–96.
- Kenward, H. 2000. *Assessment of insect remains from a sample from the Flodden Hill rectilinear enclosure*. York: Environmental Archaeology Unit York Report 2000/79.
- Kenward, H. forthcoming. A regional review of invertebrates from northern England. London: Centre for Archaeology Reports.
- McCullagh, R.P.J. and Tipping, R. (eds) 1998. *The Lairg Project 1988– 1996. The Evolution of an Archaeological Landscape in Northern Scotland*. Edinburgh: Scottish Trust for Archaeological Research Monograph 3.
- Miller, J., Ramsey, S., and Alldritt, D. 2000. Charred and waterlogged plant macrofossils, in Haselgrove and McCullagh 2000, 40–49; appendices 5–9, 207–233.
- Moore, P.D., Webb, J.A., and Collinson, M.E. 1991. *Pollen Analysis* (2nd edn). Oxford: Blackwell Scientific Publications.
- Pratt, K.E. 1996. *Development of Methods for Investigating Settlement and Land-use using Pollen Data: a Case Study from North-East England circa 8000 cal. BC – cal. AD 500*. Unpublished Ph.D. thesis, University of Durham.
- Rackham, D.J. 1987. The animal bone, in Heslop 1987, 99–109; Fiche 5: F1–G14; Fiche 6: A1–F8.
- Rodwell, J.S. (ed.) 1991a. *British Plant Communities, Vol. 1. Woodlands and Scrub*. Cambridge: Cambridge University Press.
- Rodwell, J.S. (ed.) 1991b. *British Plant Communities, Vol. 2. Mires and Heaths*. Cambridge: Cambridge University Press.

- Rodwell, J.S. (ed.) 1992. *British Plant Communities, Vol. 3. Grasslands and Montane Communities*. Cambridge: Cambridge University Press.
- Rodwell, J.S. (ed.) 1995. *British Plant Communities, Vol. 4. Aquatic Communities, Swamps and Tall-Herb Fens*. Cambridge: Cambridge University Press.
- Rodwell, J.S. (ed.) 2000. *British Plant Communities, Vol. 5. Maritime Communities and Vegetation of Open Habitats*. Cambridge: Cambridge University Press.
- Sugita, S. 1993. A model of pollen source area for an entire lake surface, *Quaternary Research* 39, 239–244.
- Tipping, R. 1992. The determination of cause in the generation of major prehistoric valley fills in the Cheviot Hills, Anglo-Scottish borders, in S. Needham and M.G. Macklin (eds), *Alluvial Archaeology in Britain*, 111–121. Oxford: Oxbow Books.
- Tipping, R. 1994. The form and fate of Scottish woodlands, *Proceedings of the Society of Antiquaries of Scotland* 124, 1–54.
- Tipping, R. 1995. Holocene evolution of a lowland Scottish landscape: Kirkpatrick Fleming. Part II, regional vegetation and land-use change, *The Holocene* 5, 83–96.
- Tipping, R. 1997. Pollen analysis and the impact of Rome on native agriculture around Hadrian's Wall, in A. Gwilt and C. Haselgrove (eds), *Reconstructing Iron Age Societies*, 239–247. Oxford: Oxbow Monograph 71.
- Turner, C.H. 1968. *Studies on a small post-glacial peat deposit in Northumberland*. Unpublished M.Sc. thesis, University of Durham.
- Van der Veen, M. 1987. The plant remains, in Heslop 1987, 93–99.
- Van der Veen, M. 1992. *Crop Husbandry Regimes: an Archaeobotanical Study of Farming in Northern England 1000 BC–AD 500*. Sheffield: Sheffield Archaeological Monograph 3.
- Waddington, C. forthcoming. *Flodden Hill Rectilinear Enclosure*.
- Wheeler, R.E.M. 1954. *The Stanwick Fortifications*. Oxford: Reports of the Research Committee of the Society of Antiquaries of London 17.
- Wilson, D. 1983. Pollen analysis and settlement archaeology of the first millennium BC from north-east England, in J.C. Chapman and H.C. Mytum (eds), *Settlement in North Britain 1000 BC–AD 1000*, 29–54. Oxford: British Archaeological Reports British Series 118.

Simple tools for tough tasks or tough tools for simple tasks? Analysis and experiment in Iron Age flint utilisation

Jodie Humphrey

Introduction

It has often been assumed that prehistoric technological development is a linear process; for example, that stone tools automatically progress into metal ones once the latter material becomes available. The British Iron Age is a case in point. The accepted view sees a drop in the use of flint at the start of the period, mirrored by a concomitant rise in metal. The research presented here seeks to challenge this assumption by establishing that flint definitely *was* utilised in the Iron Age and that flint tools and technology did not cease at the end of the Bronze Age, to be replaced by metals. I shall investigate this phenomenon by questioning the relationship between technology and Iron Age society. Was there a morphologically or technologically distinctive Iron Age flint industry? Were the flint tools traded or manufactured locally? Are there any geographical or chronological differences in flint use? What components of society were using flints? What functions did the flints have? What factors delayed the redundancy of a lithic industry?

In exploring these questions, the paper will adopt a threefold structure. First, I shall examine where flint appears to have been utilised in the Iron Age and look at the various factors that form and shape this distribution. Second, case studies are presented which highlight morphological and technological aspects of the flint assemblages, in order to identify characteristics upon which to construct a typology for such material, and to form ideas of possible

functions by identifying artefact associations. Third, one of the possible functions – butchery – is examined by performing an experiment using flint tools and iron knives manufactured using Iron Age techniques, in order to discover: a) if the task could be undertaken as efficiently with flint as with iron tools; and b) to gain any insights into human judgment concerning choice of tool and performance of task.

The debate about Iron Age flint use came to the fore in Saville's (1981) paper in the journal *Lithics*, where he argued against Smith's (1981) case for an Iron Age date for the Meare Village West flint assemblage. Since then, Saville's view that flint utilisation effectively ended at the close of the late Bronze Age has generally held sway, although a few lithic analysts have suggested that some flint assemblages were potentially of Iron Age date. My own research has sought to identify a distinctive Iron Age flint assemblage by establishing morphological and technological characteristics that might permit its identification. This has not been a straightforward task, due to the difficulties of identifying residual material on later sites, and the effect that this has had on the collection, retention and detailed recording of lithics from Iron Age sites. The success of such an exercise, and the very acceptance or rejection of the notion of Iron Age flint industries, hinges on the identification of securely stratified archaeological contexts for the material. Fortunately, there are a considerable number of sites where such conditions exist.

Moving beyond the Bronze Age: identifying Iron Age assemblages

Drawing on previous research on Middle to Late Bronze Age lithic assemblages (e.g. by Ford *et al.* 1984; Martingell 1988; Herne 1991; A. Brown pers. comm.), certain trends can be observed in lithic technology towards the end of the Bronze Age (and later). They are as follows:

- Decline in knapping skills
- Increased use of locally available raw materials
- Non-curation of products
- Growth in the expedient production of artefacts

- Restricted range of recognisable 'tool' types
- Emphasis on thick, squarish flakes
- Flake scars on the dorsal surfaces of pieces are not regular, perhaps indicating that cores were simply rotated to find a good edge to use as a striking platform

These in turn have formed the basis for more detailed analysis undertaken by the author (Humphrey 1996; 1998; 2004; Humphrey and Young 1999; Young and Humphrey 1999), leading to the highlighting of further morphological and technological attributes, from which it should eventually be possible to create a typological sequence for Iron Age lithics:

- Utilisation of highly localised raw materials – some of which may be of very low quality
- Small assemblage sizes
- Simple core/flake technology, employing hard hammer, direct percussion
- Lack of skill/concern in knapping, evidenced by: i) obtuse striking angles; ii) a high incidence of step or hinge terminations; iii) thick, wide striking platforms; iv) irregular dorsal flake scar patterns on flakes; v) short, squat flakes with a length : breadth ratio of 1:1; vi) a high incidence of chips and chunks; vii) irregular core morphology; viii) the presence of incipient cones of percussion on core striking platforms
- A restricted range of formal tool types (scrapers, awls etc.)
- Crude hammerstones
- A predominance of secondary and inner flakes
- Probable evidence for recycling of earlier lithic material

The relevance and importance of assemblage size is worth stressing. Many flint analysts have assumed residuality, or have not analysed flint assemblages due to low numbers, assuming that no real information could be gained. Preliminary analysis on assemblages as small as 85 pieces suggests that this is not always the case. It is more difficult to extract information, but use of the observed characteristics above, along with analysis of artefact associations, does permit even small assemblages to be characterised and

interpreted. By the Iron Age, flint was not relied upon as a raw material to the same level as it had been in earlier prehistory and so was not valued enough to trade and procure over large distances. As the Bronze Age progressed, the exploitation of flint raw material became increasingly highly localised and the demand for quality material reduced (Edmonds 1995, 184). Flint tools became less valued as part of a subsistence tool kit and their value as status objects was overtaken by metals and perhaps other materials, such as shale. On this basis, flint utilisation would be expected to be much lower in the Iron Age, even though most rock and stones can be fashioned into usable tools.

Where is flint being used and why?

In order for the study to be comprehensive, the survey area was restricted to the area south of a line drawn from the mouth of the Mersey in the west, to the Wash in the east (Fig. 1). A database of 97 Iron Age sites with potential flint use was built up from a detailed literature search, but in all probability this number could be more than doubled if unpublished excavations were taken into consideration. The sites span the whole of the Iron Age, but are generally Early–Middle Iron Age in date. Figure 1 depicts only 88 of the 97 sites: the remainder lack specific grid references, two being located on the Isle of Purbeck, two each in Oxfordshire and Sussex, and one each in Anglesey, Essex and Hampshire. A full listing is given in the Appendix, together with published references for each site.

As with all distribution maps, it is crucial to ask if the spread of points is a true representation of the available data. Given that the database uses published sources only, it is inevitably an incomplete picture of the sites with potential Iron Age assemblages. Furthermore, the inclusion of each site on the list is based on re-evaluation of the published flint assemblage, using the criteria set out above. Only a sample of the sites have been analysed in detail to establish a definite Iron Age context for the flints. It is hoped, however, that by drawing attention to all 97 sites, the remainder will be reanalysed or reconsidered in the future.

So what factors shaped this distribution? One important consideration is the extent to which other archaeological activities

and notions have played a part. First, how much have accepted ideas on the decline of flint use after the Bronze Age affected the nature of its recording? From the published data, this seems to have been particularly influential in the 1970s and 1980s, when flint assemblages were often not analysed fully due to the assumption that they were residual, and merely mentioned in passing. Second, has the bias of research towards larger sites, such as hillforts, affected the picture? Although hillforts yield occasional flints, the survey suggests that it is generally on the smaller-scale domestic settlement sites where flint utilisation crops up regularly. Third, there has been much more development in the South-East than in the South-West, which prompts the question: to what extent does the observed distribution reflect modern archaeological work – both in the 1970s and 1980s and more recently under the impact of PPG16? Nevertheless, it is hoped that this preliminary distribution map will provide a platform from which such questions can begin to be addressed.

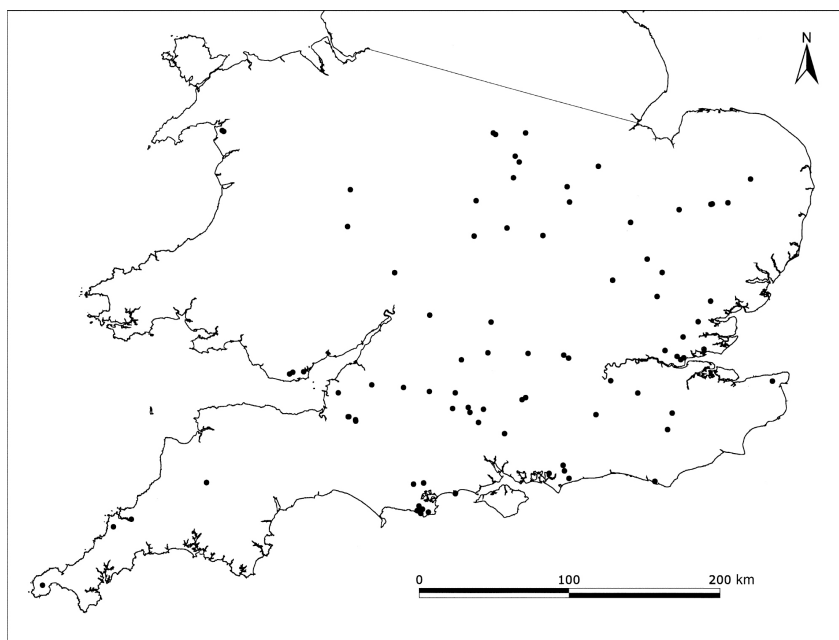


Fig. 1. Map showing distribution of 88 of the 97 probable sites of Iron Age lithic assemblages (nine sites without precise grid references are omitted; see text). A full list of sites is given in the Appendix.

Where is flint not being used and why?

As [Figure 1](#) shows, there is a notable lack of sites in Wales, Cornwall, Devon and south Somerset. I would argue that this has more to do with modern archaeological work and research bias than with absence of possible Iron Age flint utilisation, although small pockets of the country may well have been genuinely devoid of flint utilisation in the Iron Age. Over most of southern England, however, there is a general spread of *probable* sites, even if in some areas these are scattered. There is no clear division at present between areas with a heavy use of flint and areas with no evidence of utilisation, just a general scatter of sites with a few denser areas. Furthermore, the majority of investigated Iron Age sites in Wales seem to be hillforts, a class of site at which there appears to be limited utilisation of flint, as I have already indicated.

Another factor to consider is geology. In Wales, the landscape has more in common with northern Britain than it does with central and southern Britain. Wales is primarily made up of metamorphic rocks, such as slate, and although there may be a few other rock types deposited in, for example, river gravels and the odd deposit of boulder clay from glacial deposits, they are very much in the minority. It is perhaps not surprising then that those sites with potential flint use that have so far been found in Wales appear to cluster around or near coastal areas. The same may also be said of Cornwall and parts of Devon. These are areas formed mainly from igneous rocks, i.e. lacking major flint resources. Once again, those sites that have been discovered are in coastal areas in the far South-West, which is where most of the chalk – generally a better quality source of flint – is located.

The case studies

Qualitative and quantitative results

To give an idea of how some of the observed criteria manifest themselves in the analysis of these assemblages, two preliminary case studies are presented here and compared with two sites that have been analysed in more detail. These highlight some of the more basic patterns which consistently occur in the sites examined so far.

The Iron Age settlement of North Berstead, West Sussex, yielded an assemblage of 434 flint pieces, including 21 Mesolithic artefacts and some Beaker-associated material. The majority of the lithic finds were from Iron Age contexts (Bedwin and Pitts 1978, 295; 303). The first question facing us is whether, given the presence of earlier prehistoric material on the site, we can confidently separate and identify any Iron Age flint? The second site, Budbury, Wiltshire, is an Iron Age promontory fort with 229 flint pieces. The only trace of earlier activity comes from a buried land surface, but this has been dated to the period immediately prior to construction of the rampart by pottery evidence (Wainwright 1970, 115; 120; 123; 145), i.e. within the Early Iron Age.

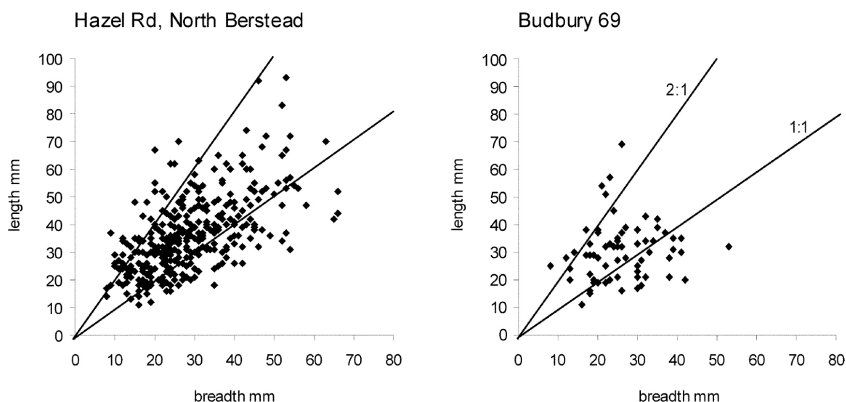


Fig. 2. Comparison of length : breadth ratios of complete flakes from North Berstead and Budbury.

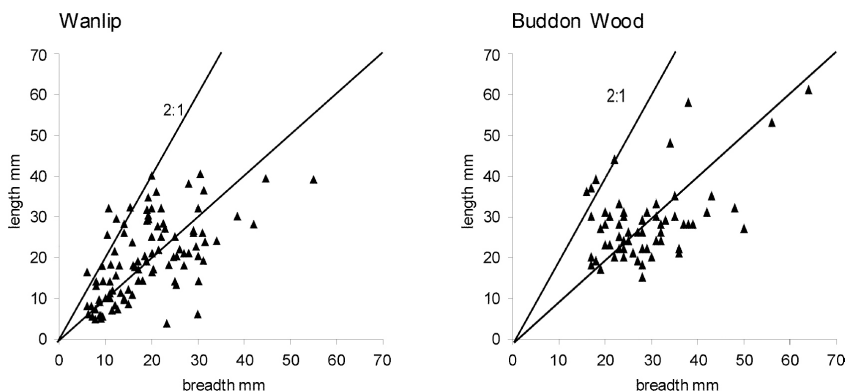


Fig. 3. Comparison of length : breadth ratios of flakes from Wanlip and Buddon Wood.

Looking first at the length : breadth ratios, it is clear that there is a preference for short squat flakes on both sites (Fig. 2). Despite the difference in assemblage sizes, the patterns are very similar, as indeed is the case for all the variables to be examined here for these two sites. Budbury has a particularly marked predominance of short squat flakes, particularly those which are broader than their length. North Berstead, however, shows a higher number of blade-like flakes and has a few true blades and bladelets (true blade proportions being length twice the breadth), but this can be explained by the presence of earlier material, particularly the Mesolithic pieces. At the time of writing, further analysis of the context and associations of the flints from the latter site could not be undertaken, due to difficulties in locating the original site archive. This might well have permitted the flints to be separated into their discrete chronological categories for analysis. Whilst the Mesolithic material can be identified reasonably easily, due to its distinct morphology and technology, it is much more difficult to distinguish between Bronze and Iron Age material unless immediately diagnostic pieces present themselves. If the Beaker-associated material could be removed, we might then expect to see two distinct clusters on the scattergram: one group of flakes of bladelet and blade proportions representing the Mesolithic component, and a second cluster of much shorter and broader flakes with common ratios of 1:1 representing the Iron Age component.

If we now examine the length : breadth ratios for two sites in Leicestershire, Wanlip and Buddon Wood, which have been analysed in greater detail (Cooper and Humphrey 1998; Humphrey 1998), we see a similar emphasis on short squat flakes (Fig. 3). Again, the flakes are predominantly 1:1 in ratio, or broader than they are long. Wanlip also has evidence for very small flakes representing debitage, whereas at Buddon Wood there is a complete absence of such flakes. This, however, is purely down to the recovery methods used during excavation – sieving took place at Wanlip and not at Buddon Wood.

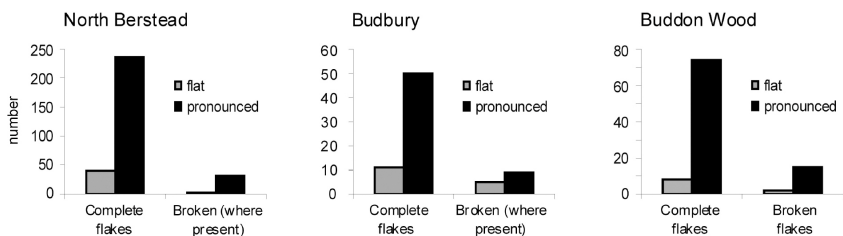


Fig. 4. Comparison of bulbs of percussion from North Berstead, Budbury, and Buddon Wood.

Turning now to the method of percussion (whether the core was struck with a hard or soft hammer to remove a flake, resulting in pronounced or flat bulbs of percussion), we can see from [Figure 4](#) that the assemblages from both North Berstead and Budbury are dominated by pronounced bulbs of percussion, indicative of use of a hard hammer. The proportions are again remarkably similar despite the different assemblage sizes. The Buddon Wood material shows a similar preponderance of pronounced bulbs of percussion. The percentage of hard hammer percussion used in flake production is identical, whether only complete flakes are considered, or broken flakes are included as well: at North Berstead the figures are 85.5% for complete flakes, and 86% when broken flakes are included; at Budbury they are 82% and 79% respectively; at Buddon Wood 85.5% and 86%; and at Wanlip 61% and 63%. It has been suggested that broken flakes (where present) are too variable to form the basis for any firm analysis, due to the possibility of post-deposition breakage and recovery bias, but the remarkable similarity of percentage variance between the two sets of figures (1–3%) *does* suggest the possibility of pre-deposition breakage of a similar character, whether through use or deliberate breaking. Incorporating broken flakes in analysis can in fact be valuable.

Comparing hinged and step terminations against feathered distal ends can provide evidence for unsuccessful removal of flakes. This is usually a result of either a lack of skill in knapping technology, *or* a reduction in the concern for a high quality/aesthetically pleasing piece. In the North Berstead and Budbury material, there is greater evidence for this than is generally seen in earlier period assemblages ([Fig. 5](#)). The higher level of retouched ends in the North Berstead assemblage is a function of the higher than average

number of retouched pieces. The higher level of stepped terminations at Budbury is, I would suggest, associated with the large number of core fragments recorded. This assemblage exhibited a high level of reused material, much of which appeared to be composed of badly shaped old cores and larger chunks, resulting in thick squat flakes. It may have been difficult to remove feathered flakes with any ease from this material.

The flakes from Buddon Wood also have a high proportion of hinged and step terminations (38%; [Fig. 6](#)). Although the Buddon Wood material has not been broken down in the same manner as the other two sites, if the North Berstead material was amalgamated, a pattern very similar to that for Buddon Wood would materialise (39% hinge/step terminations, 46% feathered, and 15% retouched), whilst at Budbury, hinge/step terminations would exceed feathered (53% hinge/step terminations, 41% feathered, and 6% retouched). Not only do these values for hinge and step terminations appear to be much higher than in earlier assemblages generally, the similarity of percentage value is notable. Wanlip is, however, the exception with only 13% hinge/step terminations. Although this figure is markedly lower, it is still significant and one can only speculate as to the reasons behind this.

A further form of qualitative (rather than quantitative) analysis using dorsal scar patterns produced interesting results. North Berstead and Budbury both show a predominance of irregular flake removals (56% and 70% respectively), indicating that the cores were turned randomly in choosing the next platform for flake removal ([Fig. 7](#)). Both show extremely low levels for a 90° pattern (1% and 6% respectively). The higher level of parallel dorsal scars at North Berstead (43%) may represent the remnants of earlier technology on re-used pieces. Again, it would be interesting to re-plot this chart without the earlier material.

In the preliminary analysis, the presence of cortical butts appeared to be a recurring feature; as a result, these have been systematically recorded. At North Berstead and Budbury the percentage was not as high as expected, but a presence was still apparent with exactly 10% having cortical butts ([Fig. 8](#)). This contrasts with Buddon Wood where 44% of complete and broken flakes had cortical butts and at Wanlip where the figure was around

25%. This may, however, have as much to do with the type of tool required, the shape of flakes, and with different functional requirements, as with anything else.

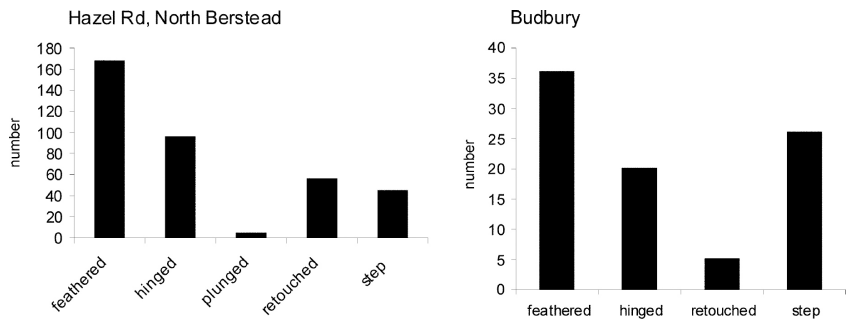


Fig. 5 Comparison of flake terminations (where present) on all flakes from North Berstead and Budbury.

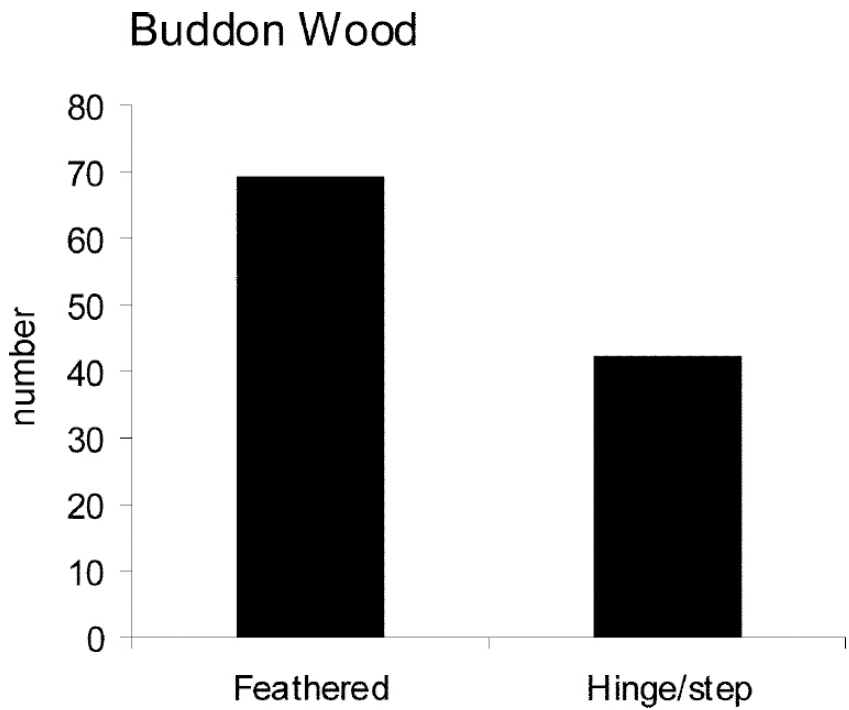


Fig. 6. Flake termination (where present) on all flakes from Buddon Wood.

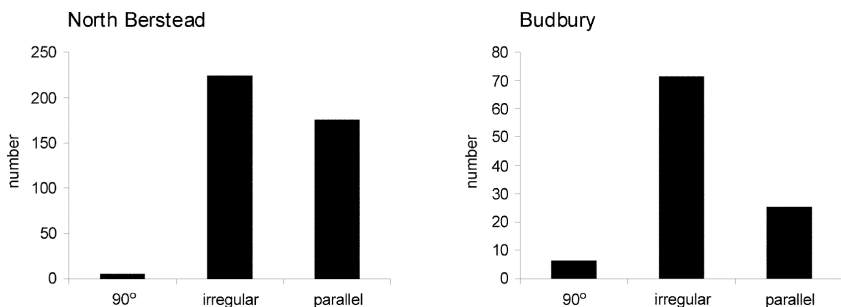


Fig. 7. Comparison of dorsal scar types from North Berstead and Budbury.

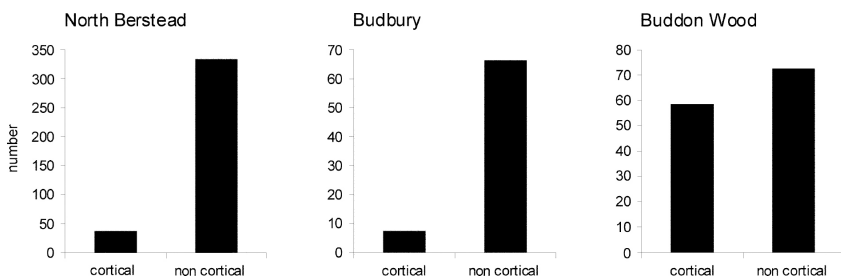


Fig. 8. Comparison of cortical butts from North Berstead, Budbury, and Buddon Wood.

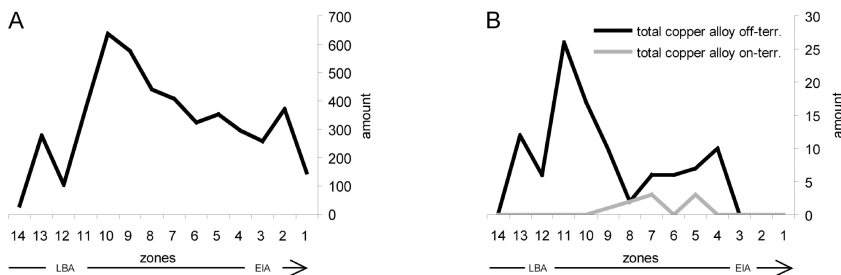


Fig. 9. Comparison of flint and copper alloy utilisation over time at Potterne. A. Worked flint by zone in all areas of cutting 12. B. Copper alloy artefacts (pre-Zone 3).

In summary, all four assemblages show remarkable similarities in flake morphology and percentage ratios of hard hammer percussion, hinge/step termination and irregular dorsal scars, despite the variations in assemblage size. Two anomalies, however, warrant further examination. The lower percentage of hinge/step terminations at Wanlip – 13%, as opposed to between 38–53% – is notable and might be explained by better quality material or more

skilled knapping. There may, however, be other reasons for this, but I would rule out the argument that the assemblage is wholly residual, since the majority of other criteria examined fit the proposed Iron Age typology. The second anomaly is the variable cortical butt percentages. Reasons for this again require further examination, but may relate to the function of the tools and the comfort of the user (see below).

Material associations

Studying the technological and morphological attributes of flints from Iron Age sites does indeed permit patterns such as those above to be highlighted, in many cases enabling these flints to be differentiated from earlier lithic industries in order to create new typologies for Iron Age flint assemblages. Yet in order to understand why flint is still used into the Iron Age, and to assist the secure dating of such material, it is necessary to analyse the associations of the flint with other material culture.

Studies of lithic material from Potterne, Wiltshire, shed new light on how many everyday practices may have been carried out using particular tools, and how flint coincided with other raw materials as a functional resource. The Potterne deposit was interpreted as accumulated rubbish; to combat the problem of undifferentiated stratigraphy, the trenches were divided into one-metre squares and excavated in spits (zones 2– 14; Lawson 2000, 13; 19; 25). Together, these zones span the Late Bronze Age and the beginning of the Iron Age, c. 1100–600 BC. Whilst copper alloy artefacts are varied and datable, their numbers are unremarkable compared to the quantity of flint from the site (Fig. 9). Clearly, much of the copper alloy would have been recycled, which must be one factor behind this discrepancy. Nevertheless, as Figure 9 shows, comparison of the total number of copper alloy artefacts (pre-zone 3) from the *whole* site against flint from trench 12 only, suggests that flint was utilised to at least the same levels as copper alloy at this time, even into the Early Iron Age.

This trend becomes even clearer when identified copper alloy ‘tools’ from the whole site are compared against the small number of identified retouched flints from the sampled trowelled columns (Fig. 10). Flint appears to increase in use when copper alloy

decreases and vice versa. If one adds all potentially functional and utilised unmodified flakes, the point is further emphasised.

In addition, flint follows the same pattern of occurrence as shale and worked bone, perhaps suggesting that flint implements were used for making these items (Fig. 11). The edge of a flint implement is sharper than any other material, unlike metal does not require constant re-sharpening, and costs less to replace. Thus it is a prime material for such tasks as working shale, jet and bone. As bone is softer, however, sharp copper tools could also have been used for this purpose. This may have been the case in zone 7 where we see only a small drop in worked bone artefacts, little or no evidence for flint implements, but an increase in copper tools. The usual assumption is that metal artefacts were utilised to work bone, but Figure 11 may go some way in supporting the idea that flint implements were at least part of the tool kit for working this material. Incidentally, copper alloy artefacts generally decrease when shale increases, which might suggest that when copper alloy was either unavailable or not in demand, shale could have replaced copper alloy as an exotic raw material.

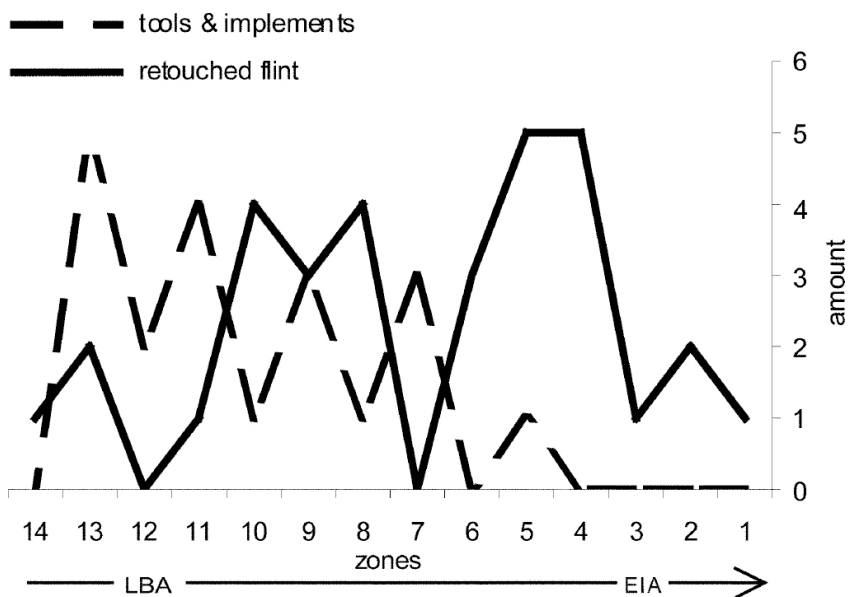


Fig. 10. Comparison of copper alloy and flint, using only copper tools and implements (dashed line) and retouched flint pieces (solid line) over time in

cutting 12 at Potterne (columns A and B only).

The evidence from Potterne highlights the kind of issues that can be addressed once the continued utilisation of lithic material is acknowledged. Yet many older reports have paid little, if any, attention to flint assemblages and it is quite clear from this re-analysis of the Potterne material just what evidence for everyday activities we are potentially missing if we continue to ignore lithic data.

What were they used for? A butchery experiment

Having looked at ways in which to identify Iron Age flint and how useful it could be in aiding our understanding of everyday activities, an experiment was performed to attempt an understanding of lithics in action. The main objectives of the experiment were as follows:



Fig. 11. Association of retouched flint, shale/jet and worked bone over time in cutting 12 at Potterne (trowelled off-terrace columns).

1. To assess the relative merits of three iron knives and several flint implements in performing disarticulation and filleting in the manner thought to have occurred at Danebury.

2. To record empirical observations from a skilled professional concerning the order of dismemberment and incidence of cut-marks against those interpreted from Danebury.
3. To record factors that are important for the study of meat consumption in the past.
4. To calculate the live weight, dead weight, dressed weight, bone weight and age of animal.
5. To identify use wear on the knives and flint.
6. To investigate the morphology of cuts into the bone and compare them against the Danebury examples, in an attempt to identify which tools may have been used in the Iron Age.

The experiment was carried out jointly with Stephanie Knight, who was researching butchery practices in the Iron Age (Knight 2002; 2003). This paper will concern itself with the first two objectives only. Information regarding the other objectives can be sought from Knight, and data regarding the use-wear of the iron knives from Peter Crew, at Snowdonia National Park, where the knives were returned for analysis after the experiment. The three knives (Fig. 12) were made using Iron Age technology which Crew has been studying for 20 years (e.g. Crew 1991). They are the first of their kind made and used in this manner. The iron knives were hafted into handles made from sheep horns. In addition, Lynden Cooper from University of Leicester Archaeological Services and the author made a selection of flint tools, working within the guidelines highlighted in the first section of this paper, to create usable flakes, knives and scrapers (Fig. 13).

Initially, a whole wild boar was to be used. This was for two reasons; it is closer to the Iron Age pig species and each half could be separately dissected, one with the flint and the other with the iron implements. Due to the foot and mouth crisis in 2001, however, it was impossible to obtain a whole boar. Instead, a Leicester butcher, Mr Wood, was able to provide two pig heads and two hocks (the cut of meat from the radius and ulna).

Disarticulation and filleting was performed by Mr Wood, drawing on Knight's research on Iron Age butchery. The butcher was given free choice of the full range of implements when using both the flints and the iron knives in each half of the experiment, and was not influenced in any way by our knowledge of the implement types

and qualities. The butcher's considered judgements were of particular interest as we hoped to gain some insight into similar decisions that may have been taken in the Iron Age on the production and use of particular pieces to perform such tasks. The flint pieces chosen by the butcher are listed in [Table 1](#).



Fig. 12. Iron knives used in the butchery experiment (photo: J. Humphrey and S. Knight).

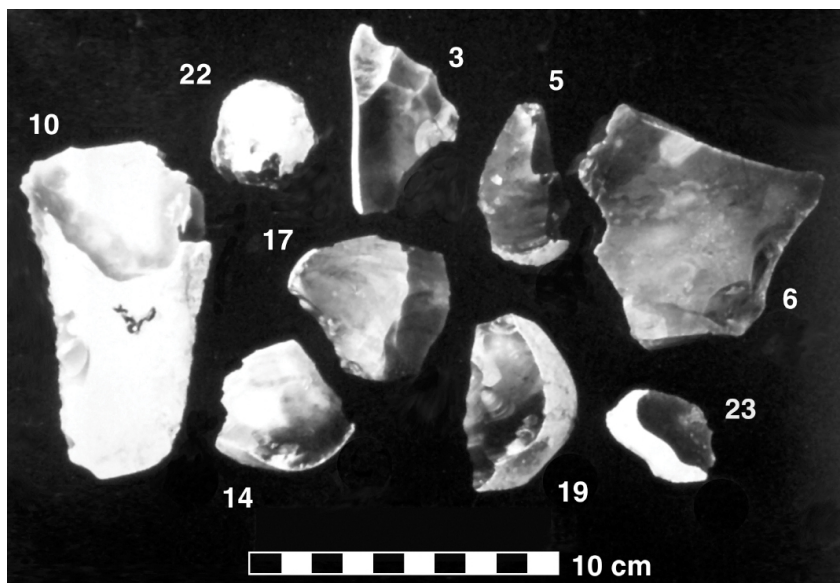


Fig. 13. *Flints used in the butchery experiment (photo: J. Humphrey and S. Knight).*

Tables 2 and 3 describe the sequence of disarticulation and filleting performed on each hock (Fig. 14) and head (Fig. 15) for both the flints and iron knives. The comments given by the butcher regarding the performance of each tool and any further comment regarding why and how he chose each piece for particular tasks is also listed. It was apparent throughout that the flint implements could perform the same butchery tasks as well as, and in some cases better than, the iron knives. If we are to consider that flint tools may have been used alongside metals in butchery practice at this period, we need to move beyond the ‘accepted notion’ that increasing social complexity encouraged greater sophistication in butchery practice, and that it was the arrival of metal tools that enabled more complex tasks to be undertaken.

<i>Flint</i>	<i>Description</i>
3	Longer secondary unmodified flake
5	Sharp secondary chunk
6	Thick secondary flake with retouched crushed edge
10	Knife, due to bifacial retouch on one edge

14	Secondary unmodified flake
17	Secondary unmodified flake
19	Secondary unmodified flake
19	Secondary unmodified flake
22	Scraper
23	Secondary unmodified flake

Table 1. Description of the flint pieces chosen by the butcher to perform the butchery tasks.

Knight's evidence shows that Iron Age 'butchers' repeatedly produced specific cuts of meat, with a number of critical decision-making steps incorporated into this process (Knight 2002; 2003). All of the flint pieces chosen and utilised by the butcher showed evidence of poor craftsmanship in their production, in the way of hinge terminations, rings of percussion, oddly shaped flakes, etc. It was interesting to note that these flaws do not make a tool inadequate for use. The tools are not only as efficient as better made flint objects but also can perform exactly the same tasks as iron knives. Function appears definitely to outweigh aesthetics for Iron Age flint tools. Analysts therefore need to move beyond the notion that these poorly made implements and flakes are just waste material or *ad hoc* tools for simple tasks; they should not be marginalised in the analysis of lithic assemblages.

An additional point demanding further comment is the decision behind splitting the skull with the flint tools. This was obviously not a difficult task for the iron knives, but how was this to be achieved with the limited selection of small flint flakes? In accordance with the butchery evidence from pigs at Danebury, the heads were sometimes split in half, but only in the late Iron Age (Knight 2001; 2003). This was so that the mandible could be disarticulated from the cranium. The aspiration of observing a professional's decision-making was revealed at this point through the most unexpected but simple of solutions (Fig. 16). It took the butcher less than a minute to decide to use No. 6, a thick secondary flake with a crushed edge, as a chopper/wedge, along with the hammerstone. Once the wedge had reached the lower end of the snout, it was removed, and the butcher prized the two halves apart with his hands. Although the split was not exactly central down the snout, it did not affect further filleting of the head.

<i>Flint</i>	<i>Head</i>	<i>Hock</i>	<i>Filleting</i>	<i>Disarticulating</i>	<i>Performance / comment</i>
10		✓	meat from bone		Did not cut through the skin easily
19		✓	meat from bone & skin removal		Removed meat from the bone successfully leaving very little meat behind. Easy to use, needing little pressure. Did not appear to lose sharp edge in process. Skin removal not successful as could not cut through membrane (Fig. 14)
2		✓	skin removal		OK, but not much better than 19.
17		✓	skin removal		Excellent, probably would have been good at filleting too
6	✓			split head in two	Used with hammerstone as a wedge to cut down through centre of snout. A good tool as it split the skull easily without hitting the brain (Fig. 15).
17	✓		tongue removal		Removed the tongue easily.
	✓			1st half – disarticulate mandible	Used with a sawing action to cut through meat and bone.
19	✓		meat removal from mandible		Performed the task successfully (Fig. 16).
17	✓		remove cheek meat		Too large; smaller tool required.
23	✓		remove cheek meat		Very good tool, particularly for tight areas such as around the eye socket.
17/23	✓		remove any remaining meat on skull		17 lost <i>very</i> sharp edge and so was used with 23 to remove remaining meat successfully.
3	✓		remove remaining meat inside skull cavities		Used to reach inside skull but too sharp to hold, resort back to 17.
14	✓			2nd half – split lower jaw and remove mandible from skull	Difficult to hold. Therefore, 17 & 19 used to perform most of the dismembering and filleting on second half of skull, as on first half.
3/5	✓		difficult areas and cavities		Sharpness of tool 3 noted previously when trying to use on first half of skull and so adjusted position in hand for comfort. Completed difficult areas of second skull half with both tools.

Table 2. Sequence and description of disarticulation and filleting performed on one pig hock and head, detailing the performance of the flint tools utilised and butcher’s comments.

<i>Iron knife</i>	<i>Head</i>	<i>Hock</i>	<i>Filleting</i>	<i>Disarticulating</i>	<i>Performance / comment</i>
1		✓	meat removal		Not as efficient as the flint, as reluctant to go through the skin. Sharpened with traditional whetstone, but no improvement. Comfortable to hold due to handle.
2		✓	meat removal		Much better edge, but not as sharp as the flint. Was able to remove skin also. Handle was advantage, giving more leverage.
3	✓			split skull in two	Used with hammerstone to cut through centre of skull down through snout. Only difference between flint and knife was that the handle allowed the knife to be guided more accurately.
	✓			disarticulate mandibles	Very efficient and quick, but the rigidity of knife and handle was familiar and with practice the flint may have been as quick.
2	✓		meat removal from mandibles & skull halves, skin removal		Removed all meat and skin successfully although it began to lose its sharp edge.

Table 3. Sequence and description of disarticulation and filleting performed on one pig hock and head, detailing the performance of the iron knives utilised and butcher’s comments.



Fig. 14. Filleting of the pig hock (cut of meat from the radius and ulna bones) using a flint implement (photo: S. Knight and J. Humphrey).



Fig. 15. Splitting of the pig skull using a flint chopper and hammerstone (photo: S. Knight and J. Humphrey).

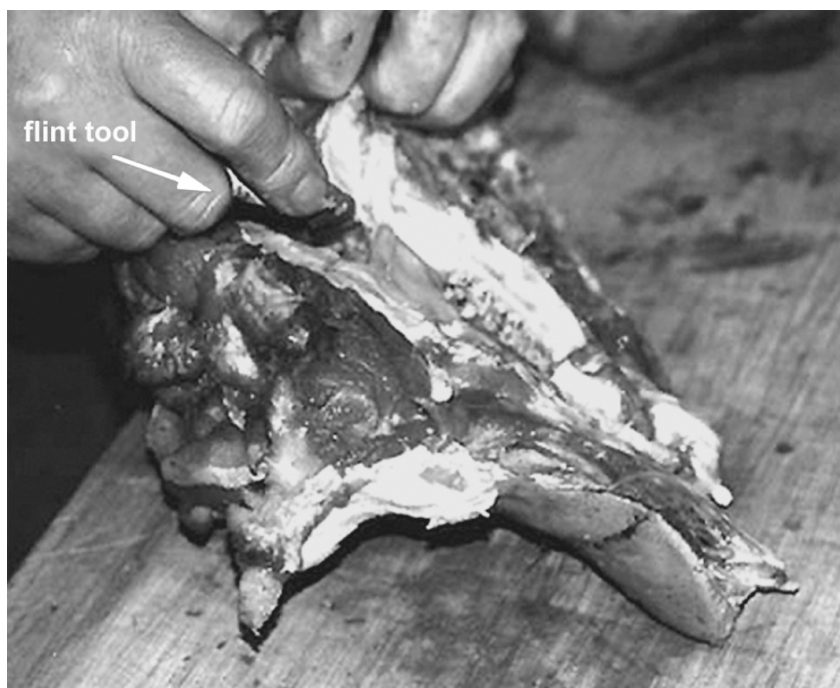


Fig. 16. Filleting of the mandible using a flint implement (photo: S. Knight and J. Humphrey).

Furthermore, it was observed how important comfort of a tool, as opposed to aesthetics, must be in order to perform a task efficiently, a point stressed in my current and earlier research (Humphrey 1998). The function of a flint implement is often determined in analysis by the retouch, but retouch can be made to blunt an edge for the comfort of the user also. Furthermore, cortex left on a tool can often be mistaken for a decline or lack of technology in flint tool production. Yet it may be purposely left there to soften the area where it is held in the hand. Why remove cortex if you do not have to? From the number of cortical butts present in assemblages, this dictum may have had some validity in the Iron Age. What is interesting here is that with the exception of the scraper, which does not really have any sharp edges, all of the flint pieces chosen by the butcher were secondary, allowing for some element of

comfort in his hand, a functional choice at least as important as the cutting qualities.

Conclusion

On the whole, clear and positive results have been reached from the study. There are a few anomalies, but these only make the study of Iron Age flint utilisation more interesting by raising new and motivating questions. To date, 97 sites in central and southern England and Wales have been identified as *potential* loci for Iron Age flint utilisation. The fact that these have been identified from a literature search suggests that the true number could be much higher. This finding must, however, be viewed with prudence, as the distribution is not without its flaws. Modern archaeological work, data collection, and geology must all have had an effect on the creation of gaps and clusters on the map, perhaps hiding the real pattern of Iron Age use. Yet the distribution of the 97 sites does suggest that use of flint was widespread in this period, even if we cannot as yet see any conclusive regional patterns.

Despite variable assemblage size, the case studies produced similar results, assemblages being characterised by a predominance of hard hammer percussion; short squat flakes with ratios close to 1:1; a high incidence of hinge/step terminations; and irregular dorsal scar patterns. Such widespread similarities provide a technological and morphological basis for characterising an Iron Age flint ‘industry’. The anomalies are few, i.e. presence of cortical butts, and only add to the inherent variability of assemblages between sites and regions. The examination of the Potterne material culture highlights a few of the possible functions for flint implements, such as the working of shale and bone, as well as its use alongside metal tools for specific tasks. One possible function – butchery – was examined by way of an experiment, which yielded clear and conclusive results. The flint tools, which were mostly unmodified and poorly manufactured, were able to complete precise tasks of disarticulation and filleting as well as, and sometimes better than, iron knives. It was also clear that the comfort of a tool is as important as its function for the user.

The results presented here are by no means definitive with regard to the identification of Iron Age flint assemblages, their distribution

in the landscape, or their role in Iron Age society. Instead, they form part of a wider study (Humphrey 2004), which aims to inspire further research on Iron Age flint utilisation and thus contribute to a better understanding of the period.

Appendix: Listing of 97 Iron Age sites with probable contemporary flint assemblages

<i>Name</i>	<i>County</i>	<i>Reference</i>
Bryn Eryr	Anglesey	Longley <i>et al.</i> 1998
Dunston Park, Thatcham	Berks.	Healey and Harding 1995
Maidenhead Thickett	Berks.	Bowden <i>et al.</i> 1982
Plants Farm, Maxey	Cambs.	Gurney <i>et al.</i> 1993
St Ives	Cambs.	Pollard 1996
Thriplow	Cambs.	Trump 1956
Goldherring, Sancreed	Cornwall	Guthrie 1969
Killibury Hillfort,	Cornwall	Miles 1977
Egloshayl		
Trevisker, St Eval	Cornwall	ApSimon and Greenfield 1972
Aston upon Trent	Derbys.	May 1970
Foxcourt Fm, Aston upon Trent	Derbys.	Hughes 1999
Ashbury	Devon	Maxfield 1985
Acton, Isle of Purbeck	Dorset	Calkin 1948
Blashenwell, Isle of Purbeck	Dorset	Calkin 1948
East Creech, Isle of Purbeck	Dorset	Calkin 1948
Eldons Seat, Encombe	Dorset	Cunliffe and Phillipson 1968
Gallows Gore, Isle of Purbeck	Dorset	Calkin 1948
Hengistbury Head	Dorset	Cunliffe 1978
Heron Grove	Dorset	Valentine 1993
Kimmeridge Isle of Purbeck	Dorset	Calkin 1948; Davis 1936
Pimperne Down	Dorset	Harding <i>et al.</i> 1993
Sheepleighs, Isle of Purbeck	Dorset	Calkin 1948

Barrington's Fm, Orsett Cock	Essex	Milton 1987
Billericay	Essex	Place 1988
Birchanger	Essex	Austin 1994a
Danbury Camp	Essex	Morris and Buckley 1978
Hadleigh, Chapel Lane	Essex	Brown 1987
Kelvedon	Essex	Clarke 1988
Lofts Farm	Essex	Holgate 1988
North Ring, Mucking	Essex	Bond 1988
Rainbow Wood, Thurrock	Essex	Potter 1974
Saffron Walden	Essex	Austin 1994b
Castle Ditches, Llancarfan	Glamorgan	Hogg 1976
Dinas Powys	Glamorgan	Alcock 1963
Whitton	Glamorgan	Jarrett and Wrathmell 1981
Ditches hillfort, North Cerne	Gloucs.	Trow 1986
Erw-wen, nr Harlech	Gwynedd	Kelly 1988
Moel y Gerddi, nr Harlech	Gwynedd	Kelly 1988
Chineham Lane, Sherborne St John	Hants.	Boismier 1998
Danebury	Hants.	Brooks 1991
Lains Farm, Andover	Hants.	Bellemy 1992
Micheldever Wood barrow site	Hants.	Fasham and Ross 1978
Micheldever Wood banjo encl	Hants.	Fasham 1987
Old Down Farm, Andover	Hants.	Davis 1981
Winnall Down	Hants.	Winham 1985
Winklebury Camp, Basingstoke	Hants.	Smith 1977
Croft Ambrey	Hereford/Worcs.	Stanford 1974
Midsummer Hill	Hereford/Worcs.	Stanford 1981
Wilbury Hill, nr Letchworth	Herts.	Moss-Eccardt 1964
Castle Hill, Capel, nr Tonbridge	Kent	Money 1975
Monkton Court Farm, Thanet	Kent	Perkins <i>et al.</i> 1994

Buddon Wood, Quorn	Leics.	Humphrey 1998; Musty 1973; Pearce 1972; Standbridge 1972
Grove Farm	Leics.	Young and O'Sullivan 1992
Normanton-le-Heath	Leics.	Young and O'Sullivan 1994
Wanlip	Leics.	Cooper and Humphrey 1998
Whitehall Wood, Upminster	London	Greenwood 1986
Llanmelin, nr Caerwent	Monmouthshire	Nash-Williams 1933
Silfield, Wymondham	Norfolk	Robins 1996
Fison Way, Thetford	Norfolk	Gregory 1991
London Road, Thetford	Norfolk	Gardiner 1993
Mickle Moor Hill, West Harling	Norfolk	Clark and Fell 1953
Clay Lane	Northampton	Windell 1990
Brigstock	Northants.	Jackson 1983
Gretton	Northants.	Jackson and Knight 1985
Stanton-on-the-Wolds	Notts.	Bird and Bird 1972
Ashville Trading Est., Abingdon	Oxon.	Parrington 1978
Barton Court Farm	Oxon.	Miles 1986
Stanton Harcourt	Oxon.	Hamlin 1966
The Devil's Churchyard, Checkenden	Oxon.	Chambers 1986
Dibble's Farm	Somerset	Morris 1988
Glastonbury Lake Village	Somerset	Bullied and Gray 1917
Glastonbury Tor	Somerset	Rahtz 1970
Meare Lake Village, East	Somerset	Avery 1968; Coles 1987; Orme <i>et al.</i> 1983
Meare Lake Village, West	Somerset	Orme <i>et al.</i> 1981; Smith 1981; Gray 1966
Row of Ashes Farm, Butcombe	Somerset	Fowler 1968
Mildenhall Fen	Suffolk	Clark 1936; Clark. <i>et al.</i> 1960
Alpine Avenue, Tolworth	Surrey	Hawkins and Leaver 1999
Holmbury Camp	Surrey	Winbolt 1930a
Nore Hill, Chelsham	Surrey	Skelton 1987

Carne's Seat, Goodwood	Sussex	Holgate 1986
Chidham	Sussex	Bedwin 1980
Copse Farm, Oving	Sussex	Bedwin and Holgate 1985
Garden Hill	Sussex	Money 1977
North Berstead, Bognor Regis	Sussex	Bedwin and Pitts 1978
Ounce's Barn, Boxgrove	Sussex	Bedwin and Place 1995
Saxonbury Camp, nr Frant	Sussex	Winbolt 1930b
Seaford Head Camp	Sussex	Bedwin 1986
Wolstonbury Hill	Sussex	Curwen 1930
Corley Camp, nr Coventry	Warwicks.	Chatwin 1927
Park Farm, Barford	Warwicks.	Cracknell and Hingley 1993–94
Budbury	Wilts.	Wainwright 1970
Figcheldean	Wilts.	Graham and Newman 1993
Liddington Castle	Wilts.	Hirst and Rahtz 1996
Pewsey Hill	Wilts.	Thompson 1971
Potterne	Wilts.	Lawson 2000
Segsbury	Wilts.	Unpublished
Warren Hill	Wilts.	Stevens 1993

Bibliography

- Alcock, L. 1963. *Dinas Powys*. Cardiff: University of Wales.
- ApSimon, A.M. and Greenfield, E. 1972. The excavation of Bronze Age and Iron Age settlements at Trevisker, St. Eval, Cornwall, *Proceedings of the Prehistoric Society* 38, 302–381.
- Austin, L. 1994a. Flint report, in M. Medlycott, Iron Age and Roman material from Birchanger, near Bishop's Stortford: excavations at Woodside Industrial Park, *Essex Archaeology and History* 25, 43–44.
- Austin, L. 1994b. Lithics, in J. Ecclestone, Early Iron Age occupation at Saffron Walden: excavations at the Friends School, 1993, *Essex Archaeology and History* 25, 262.
- Avery, M. 1968. Excavations at Meare East, 1966, *Somerset Archaeology and Natural History* 112, 21–39.
- Bedwin, O. 1980. Neolithic and Iron Age material from a coastal site at Chidham, West Sussex 1978, *Sussex Archaeological Collections* 118, 163–170.

- Bedwin, O. 1986. Excavations at Seaford Head Camp, East Sussex, 1983, *Sussex Archaeological Collections* 124, 25–33.
- Bedwin, O. and Holgate, R. 1985. Excavations at Copse Farm, Oving, West Sussex, *Proceedings of the Prehistoric Society* 51, 215–245.
- Bedwin, O. and Pitts, M. 1978. The excavations of an Iron Age settlement at North Berstead, Bognor Regis, West Sussex 1975–76, *Sussex Archaeological Collections* 116, 293–346.
- Bedwin, O. and Place, C. 1995. Late Iron Age and Romano-British occupation at Ounces barn, Boxgrove, West Sussex; excavations 1982–83, *Sussex Archaeological Collections* 133, 45–102.
- Bellemy, P. 1992. The excavation of an Iron Age enclosure at Lain's Farm, in P. Bellemy, The investigation of the prehistoric landscape along the route of the A303 road improvement between Andover, Hampshire and Amesbury, Wiltshire 1984–1987, *Proceedings of the Hampshire Field Club and Archaeological Society* 47, 5–81.
- Bird, A. and Bird, K. 1972. A prehistoric hut-floor at Stanton-on-the-Wolds, Nottinghamshire, *Transactions of the Thoroton Society* 71, 4–12.
- Boismier, W. 1998. Later prehistoric features at land of Chineham Lane, Sherborne St. John, Basingstoke, Hampshire, *Proceedings of the Hampshire Field Club and Archaeological Society* 53, 25–33.
- Bond, D. 1988. *Excavation at North Ring, Mucking, Essex*. Chelmsford: East Anglian Archaeology Report 43.
- Bowden, M., Ford, S. and Gaffney, V. 1982. Excavation of an Earthwork on Maidenhead Thickett 1982, *Berkshire Archaeological Journal* 71, 21–31.
- Brooks, I. 1991. The prehistoric flint collection, in B. Cunliffe and C. Poole, *Danebury: an Iron Age Hillfort in Hampshire, Vol. 4. The Excavations, 1979–1988: The Site*, 8/Fiche 18: A9–C13. York: Council for British Archaeology Research Report 73.
- Brown, N. 1987. Hadleigh, Chapel Lane, in D. Priddy (ed.), *Work of the Essex County Council Archaeology Section 1986*, *Essex Archaeology and History* 18, 88–91.
- Bulleid, A. and Gray, H. St. G. 1917. *The Glastonbury Lake Village, Vol. 2*. Glastonbury: privately published.
- Calkin, J.B. 1948. The Isle of Purbeck in the Iron Age, *Proceedings of the Dorset Natural History and Archaeological Society* 70, 29–44.
- Chambers, R.A. 1986. The Devil's Churchyard: an Iron Age enclosure at Checkenden, Oxon, 1979–81, *Oxoniensia* 51, 25–30.
- Chatwin, P.B. 1927. Excavations on Corley Camp, near Coventry, *Birmingham Archaeological Society Transactions and Proceedings* 52, 282–287.
- Clark, J.G.D. 1936. Report on a Late Bronze Age Site in Mildenhall Fen,

- West Suffolk, *Antiquaries Journal* 16, 29–50.
- Clark, J.G.D. and Fell, C.I. 1953. Early Iron Age site at Micklemoor Hill, West Harling, Norfolk, *Proceedings of the Prehistoric Society* 19, 1–40.
- Clark, J.G.D., Higgs, E.S. and Longworth, I.H. 1960. Excavations at the Neolithic site of Mildenhall, Hurst Fen, Suffolk, 1954, 1957 and 1958, *Proceedings of the Prehistoric Society* 26, 202–245.
- Clarke, C.P. 1988. Late Iron Age enclosures at Kelvedon: excavations at the Doucecroft site 1985–86, *Essex Archaeology and History* 19, 15–39.
- Coles, J.M. 1987. *Meare Village East: the Excavations of A. Bulleid and H. St. George Gray*. Exeter: Somerset Levels Papers 13.
- Cooper, L. and Humphrey, J. 1998. The lithics, in M. Beamish, A middle Iron Age site at Wanlip, Leicester, *Transactions of the Leicestershire Archaeological and Historical Society* 72, 63–74.
- Cracknell, S and Hingley, R. 1993–94. Park Farm, Barford: excavation of a prehistoric settlement site 1988, *Transactions of the Birmingham and Warwickshire Archaeological Society* 98, 1–30.
- Crew, P. 1991. The experimental production of prehistoric bar iron, *Historical Metallurgy* 25, 21–36.
- Cunliffe, B. 1978. *Hengistbury Head*. London: Elek.
- Cunliffe, B. and Phillipson, D. 1968. Excavations at Eldon's Seat. Encombe, Dorset, *Proceedings of the Prehistoric Society* 34, 191–237.
- Curwen, C. 1930. Wolstonbury Hill, *Sussex Archaeological Collections* 71, 237–245.
- Davis, H.F. 1936. The shale industries at Kimmeridge, Dorset, *Archaeological Journal* 93, 200–219.
- Davis, S.M. 1981. Excavations at Old Down Farm, Andover, Part II: Prehistoric and Roman, *Proceedings of the Hampshire Field Club and Archaeological Society* 37, 81–163.
- Edmonds, M. 1995. *Stone Tools and Society*. London: Batsford.
- Fasham, P. 1987. *A Banjo Enclosure in Micheldever Wood, Hampshire*. Winchester: Hampshire Field Club and Archaeological Society Monograph 5.
- Fasham, P.J. and Ross, J.M. 1978. A Bronze Age flint industry from a barrow site in Micheldever Wood, Hampshire, *Proceedings of the Prehistoric Society* 44, 47–67.
- Ford, S., Bradley, R., Hawkes, J. and Fisher, P. 1984. Flint-working in the Metal Age, *Oxford Journal of Archaeology* 3, 157–173.
- Fowler, P.J. 1968. Excavations of a Romano-British settlement at Row of Ashes Farm, Butcombe, North Somerset, *Proceedings of the University of Bristol Spelaeological Society* 11, 209–236.
- Gardiner, J.P. 1993. The flint assemblage, in J.A. Davies, Excavation of an

- Iron Age pit group at London Road, Thetford, *Norfolk Archaeology* 41, 456–458.
- Graham, A. and Newman, C. 1993. Recent excavations of Iron Age and Romano-British enclosures in the Avon Valley, Wiltshire, *Wiltshire Archaeological and Natural History Magazine* 86, 8–57.
- Gray, H. St G. 1966. *The Meare Lake Village*, Vol. 3. Taunton: privately published.
- Greenwood, P. 1986. A late Bronze Age–early Iron Age field system and settlement at Whitehall Wood, Upminster, *London Archaeologist* 5, 171–175.
- Gregory, T. 1991. *Excavations in Thetford, 1980–1982, Fison Way*. Dereham: East Anglian Archaeology Report 53.
- Gurney, D.A., Neve, J. and Pryor, F. 1993. Excavations at Plant's Farm, Maxey, Cambridgeshire, in W.G. Simpson, D. Gurney, J. Neve *et al.*, *The Fenland Project, No. 7: Excavations in Peterborough and the Lower Welland Valley 1960–69*, 69–101. Peterborough: East Anglian Archaeology Report 61.
- Guthrie, A. 1969. Excavation of a Settlement at Goldherring, Sancreed, 1958–1961, *Cornish Archaeology* 8, 5–39.
- Hamlin, A. 1966. Early Iron Age sites at Stanton Harcourt, *Oxoniensia* 31, 1–27.
- Harding, D.W., Blake, I.M. and Reynolds, P.J. 1993. *An Iron Age Settlement in Dorset: Excavation and Reconstruction*. Edinburgh: University of Edinburgh Department of Archaeology Monograph Series 1.
- Hawkins, D. and Leaver, S. 1999. An Iron Age settlement at Alpine Avenue, Tolworth, *Surrey Archaeological Collections* 86, 141–149.
- Healey, F. and Harding, P. 1995. Worked flint, in I. Barnes, W.A. Boismier, R.J.M. Cleal, A.P. Fitzpatrick and M.R. Roberts (eds), *Early settlement in Berkshire*, 76–77. Salisbury: Wessex Archaeology Report 6.
- Herne, A. 1991. The lithic assemblage, in I. Longworth (ed.), *Excavations at Grimes Graves, Norfolk, Fascicule III*. London: British Museum.
- Hirst, S. and Rahtz, P. 1996. Liddington Castle and the Battle of Baden: excavations and research 1976, *Archaeological Journal* 153, 1–59.
- Hogg, A. 1976. Castle Ditches, Llancarfan, Glamorgan, *Archaeologia Cambrensis* 125, 13–39.
- Holgate, R. 1986. Excavations at the late prehistoric and Romano-British enclosure complex at Carne's Seat, Goodwood, West Sussex, 1984, *Sussex Archaeological Collections* 124, 35–50.
- Holgate, R. 1988. Flint, in N. Brown, A late Bronze Age enclosure at Lofts Farm, Essex, *Proceedings of the Prehistoric Society* 54, 276–280.
- Hughes, G. 1999. The excavation of an Iron Age cropmarked site at

- Foxcourt Farm, Aston-upon-Trent 1994, *Derbyshire Archaeological Journal* 119, 176–188.
- Humphrey, J. 1996. *The Iron Age – the last Stone Age?* Unpublished B.Sc. dissertation, University of Leicester.
- Humphrey, J. 1998. *Analytical Concepts at the End of Prehistory: a Study of Flint Use and Technology in the Late Bronze Age and Iron Age.* Unpublished M.A. thesis, University of Leicester.
- Humphrey, J. 2004. *Iron Age Flint Utilisation in Central and Southern Britain: the Last ‘Stone Age’? An Integrated Theoretical and Empirical Study.* Unpublished Ph.D. thesis, University of Leicester.
- Humphrey, J. and Young, R. 1999. Flint use in later Bronze Age and Iron Age England – still a fiction? *Lithics* 20, 57–61.
- Jackson, D. 1983. The excavation of an Iron Age site at Brigstock, Northants, 1979–81, *Northamptonshire Archaeology* 18, 7–32.
- Jackson, D. and Knight, D. 1985. An early Iron Age and Beaker site near Gretton, Northamptonshire, *Northamptonshire Archaeology* 20, 67–86.
- Jarrett, M. and Wrathmell, S. 1981. *Whitton: an Iron Age and Roman Farmstead in South Glamorgan.* Cardiff: University of Wales.
- Kelly, R. 1988. Two late prehistoric circular enclosures near Harlech, Gwynedd, *Proceedings of the Prehistoric Society* 54, 101–151.
- Knight, S. 2001. Beasts and burial in the interpretation of ritual space: a case study from Danebury, in A.T. Smith and A. Brooks (eds), *Holy Ground: Theoretical Issues Relating to the Landscape and Material Culture of Ritual Space*, 49–59. Oxford: British Archaeological Reports International Series 956.
- Knight, S. 2002. *Intra-Site Analysis of Animal Bone Deposition: a Case Study from Danebury.* Unpublished Ph.D. thesis, University of Leicester.
- Knight, S. 2003. The importance of being processed: butchery patterns from Danebury, in J. Humphrey (ed.), *Re-searching the Iron Age*, 25– 34. Leicester: Leicester Archaeology Monograph 11.
- Lawson, A.J. 2000. *Potterne 1982–85: Animal Husbandry in Later prehistoric Wiltshire.* Salisbury: Wessex Archaeology Report 17.
- Longley, D.H., Johnstone, N. and Evans, J. 1998. Excavations on two farms of the Romano-British period at Bryn Eryr and Bush Farm, Gwynedd, *Britannia* 29, 185–246.
- Martingell, H. 1988. The flint industry, in T.J. Wilkinson, *Archaeology and Environment in South Essex: Rescue Archaeology along the Grays Bypass, 1979/80*, 70–73. Chelmsford: East Anglian Archaeology Report 42.
- Maxfield, V. 1985. Excavations at Ashbury in 1983 with a note on Broadbury Castle, *Proceedings of the Devon Archaeology Society* 43, 51–58.

- May, J. 1970. An Iron Age square enclosure at Aston-upon-Trent, Derbyshire: a report on excavations in 1967, *Derbyshire Archaeological Journal* 90, 10–18.
- Miles, D. (ed.) 1986. *Archaeology at Barton Court Farm, Abingdon, Oxon: an Investigation of Late Neolithic, Iron Age, Romano-British and Saxon settlements*. Oxford: Council for British Archaeology Research Report 50.
- Miles, H. 1977. Excavations at Killibury Hillfort, Eglosayle 1975–6, *Cornish Archaeology* 16, 89–121.
- Milton, B. 1987. Excavations at Barrington's Farm, Orsett Cock, Thurrock Essex 1983, *Essex Archaeology and History* 18, 16–33.
- Money, J.H. 1975. Excavations in the two Iron Age hillforts on Castle Hill, near Capel, near Tonbridge, *Archaeologia Cantiana* 91, 61–85.
- Money, J.H. 1977. The Iron Age hillfort and Romano-British iron-working settlement at Garden Hill, Sussex: interim report on excavations, 1968–76, *Britannia* 8, 339–350.
- Morris, E. 1988. The Iron Age occupation at Dibble's Farm, Christon, Somerset, *Somerset Archaeology and Natural History* 132, 23–82.
- Morris, S. and Buckley, D. 1978. Excavations at Danbury Camp, Essex, 1974 and 1977, *Essex Archaeology and History* 10, 1–28.
- Moss-Eccardt, J. 1964. Excavations at Willbury Hill, an Iron Age hillfort, near Letchworth, Herts., 1959, *Bedfordshire Archaeological Journal* 2, 34–46.
- Musty, A.E. 1973. Buddon Wood – notes on recent excavations, *Transactions of the Leicestershire Archaeological and Historical Society* 48, 62.
- Nash-Williams, V. 1933. An early Iron Age hillfort at Llanmelin, near Caerwent, Monmouthshire, *Archaeologia Cambrensis* 58, 237–246.
- Orme, B.J., Coles, J.M. and Silvester, R.J. 1983. Meare Village East 1982, *Somerset Levels Papers* 9, 49–74.
- Orme, B.J., Coles, J.M., Caseldine, A. and Bailey, G. 1981. Meare Village West 1979, *Somerset Levels Papers* 7, 12–70.
- Parrington, M. 1978. *The Excavation of an Iron Age Settlement, Bronze Age Ring Ditches and Roman Features at Ashville Trading Estate, Abingdon (Oxfordshire) 1974–76*. London: Council for British Archaeology Research Report 28.
- Pearce, T. 1972. Buddon Wood – notes on recent excavations, *Transactions of the Leicestershire Archaeological and Historical Society* 47, 67.
- Perkins, D., Macpherson-Grant, N. and Healy, E. 1994. Monkton Court Farm evaluation, 1992, *Archaeologia Cantiana* 114, 237–316.
- Place, C. 1988. Flintwork, in D. Rudling, Late Iron Age and Roman Billericay: excavations 1987, *Essex Archaeology and History* 19, 27–28.
- Pollard, J. 1996. Iron Age pit alignments at St. Ives, Cambridgeshire,

Proceedings of the Prehistoric Society 62, 93–116.

- Potter, T. 1974. An Iron Age site at Rainbow Wood, Thurrock, Essex, *Essex Archaeology and History* 6, 1–12.
- Rahtz, P. 1970. Excavations on Glastonbury Tor, Somerset, 1964–6, *Archaeological Journal* 127, 1–81.
- Robins, P. 1996. Worked flint, in T. Ashwin, Excavation of an Iron Age site at Silfield, Wymondham, Norfolk, 1992–93, *Norfolk Archaeology* 42, 266–270.
- Saville, A. 1981. Iron Age flint working – fact or fiction? *Lithics* 2, 6–9.
- Skelton, A. 1987. Nore Hill, Chelsham: a newly discovered prehistoric enclosure, *Surrey Archaeological Collections* 78, 43–54.
- Smith, A.J. 1981. Flint, in Orme *et al.* 1981, 65–66; Fiche F1: 53–66.
- Smith, K. 1977. The excavation of Winklebury Camp, Basingstoke, Hampshire, *Proceedings of the Prehistoric Society* 43, 31–129.
- Standbridge, T. 1972. Buddon Wood – notes on recent excavations, *Transactions of the Leicestershire Archaeological and Historical Society* 47, 66.
- Stanford, S.C. 1974. *Croft Ambrey*. Leominster: privately published.
- Stanford, S.C. 1981. *Midsummer Hill: an Iron Age hillfort on the Malverns*. Leominster: privately published.
- Stevens, J. 1993. *An analysis of flint from Warren Hill enclosure, Salisbury Plain, Wiltshire*. Unpublished M.A. thesis, University of Leicester.
- Thompson, N.P. 1971. Archaeological research in the Pewsey Vale, *Wiltshire Archaeological and Natural History Magazine* 61, 58–75.
- Trow, S. 1986. Excavations at Ditches hillfort, North Cerney, Gloucestershire 1982–3, *Transactions of the Bristol and Gloucestershire Archaeological Society* 106, 19–87.
- Trump, D. 1956. The Bronze Age barrow and Iron Age settlement at Thriplow, *Proceedings of the Cambridgeshire Antiquarian Society* 49, 1–12.
- Valentine, J. 1993. An early Iron Age settlement at Heron Grove, Sturminster Marshall, Dorset: first excavation report, *Proceedings of the Dorset Natural History and Archaeological Society* 115, 63–70.
- Wainwright, G. 1970. An Iron Age promontory fort at Budbury, Bradford-on-Avon, Wiltshire, *Wiltshire Archaeological and Natural History Magazine* 65, 108–166.
- Winbolt, S. 1930a. Excavations at Holmbury Camp, *Surrey Archaeological Collections* 28, 156–170.
- Winbolt, S. 1930b. Excavations at Saxonbury Camp, *Sussex Archaeological Collections* 71, 223–236.
- Windell, D. 1990. *Excavations at Clay Lane 1980*. Northampton: Northamptonshire Archaeological Unit.

- Winham, R. 1985. The flint, in P. Fasham, *Prehistoric Settlement at Winnall Down, Winchester*, 84–86. Winchester: Hampshire Field Club and Archaeological Society Monograph 2.
- Young, R. and Humphrey, J. 1999. Flint use in England after the Bronze Age ... Time for a re-evaluation? *Proceedings of the Prehistoric Society* 64, 231–242.
- Young, R. and O'Sullivan, D.M. 1992. The flint, in P. Clay, An Iron Age farmstead at Grove Farm, Enderby, *Transactions of the Leicestershire Archaeological and Historical Society* 66, 54–58.
- Young, R. and O'Sullivan, D.M. 1994. The flint, in R. Thorpe and J. Sharman with P. Clay, An Iron Age and Romano-British enclosure system at Normanton-le-Heath, Leics., *Transactions of the Leicestershire Archaeological and Historical Society* 68, 50–56.

A bloodless past: the pacification of Early Iron Age Britain

Simon James

‘In reversing earlier warrior-stereotypes, we must... take care not to de-emphasise completely the possible incidence of conflict and violence in Iron Age societies and to ensure that the potential role of martial ideologies in shaping regional cultural practices and social dynamics receives its due share of attention’ (Haselgrove *et al.* 2001, 9).

Introduction

Among many later prehistorians, the 1990s saw the rise and triumph of a ‘different Iron Age’ for Britain, one radically at odds with the warrior-elite-focused paradigm that preceded it. Gone is the notion, based primarily on the hillfort-dominated archaeology of Wessex and extrapolation from Classical and medieval Irish written sources, of timeless, essentially uniform, hierarchical and warlike ‘Celtic’ societies (e.g. Cunliffe 1995, 87–97). At the start of the twenty-first century, the dominant academic discourse envisages a pre-Roman Iron Age characterised, for at least the first four of its eight centuries, by diverse and heterogeneous small-scale societies, seen in general as relatively egalitarian; gone are the previous notions of elaborate chiefdoms, or specialist classes of warrior nobles and druids. Also departed is significant discussion of warfare, physical violence, or indeed *any* form of social conflict.

Whilst I personally welcome much of this new model, I do want to question the apparent ‘airbrushing out’ of physical violence and other uncomfortable aspects of human behaviour. In effect, has the ‘different Iron Age’ thrown the baby of social conflict out with the bath water of Celticity? Is the virtual disappearance of war, violence

and conflict from discourse on the British Iron Age, especially its earlier centuries, a reasoned outcome of our new understanding of the archaeology? Or is it a *non sequitur*, based more on the wishful thinking of researchers than on the available evidence? I will argue that it is the latter, a classic example of what, following Lawrence Keeley (1996), we may call the pacification of the past, and leading to a fundamental distortion of our understanding of later prehistoric Britain.

Peace in their time?

Over a decade ago, Niall Sharples (1991) published what is arguably the last significantly new direct discussion of warfare in Iron Age Britain, albeit focused on Wessex. Highlighting the lack of any reference to warfare in much then-recent literature, he argued that patterns observed among almost all known human societies suggested that we should assume that some level of warfare was a routine part of Wessex Iron Age life (*ibid.*, 79–80). However, little heed of this has since been taken in the mainstream subject literature, dominated as it has been by other interesting and important trends, notably the ‘cosmological turn’, and emphases on special deposition and cultural diversity. Warfare and other forms of conflict and violence remain conspicuous by their virtual absence from discourse.

This situation has concerned me ever since the ‘different Iron Age’ first took shape (cf. James 1997). In a series of deservedly influential papers, Hill argued that the archaeological evidence from Iron Age Britain is against hierarchical ‘Celtic’ societies, but fits with a looser, relatively egalitarian organisation (e.g. Hill 1995a; 1995b). He also developed the increasingly widely held view that hillforts were not central places, or primarily about defence at all. Highlighting the ambiguity of the monumental evidence, he also relied more implicitly on the apparent absence of other correlates of widespread warfare – such as a lack of weapons (Hill 1995a, 49), or unambiguous evidence of attacks and slaughter – to play down the extent and significance of armed violence.

Hill mentioned warfare, but mostly in passive terms; there are references to the need for societies to defend themselves against shadowy ‘others’, but he seems reluctant to say that anyone actively

made war. ‘The archaeological evidence suggests that, rather than a world of warriors, Iron Age Britain was in fact a more humdrum world of farmers. Probably as much as 99 per cent of the million-plus population were full-time or part-time farmers’ (Hill 1996, 8). The highly contentious implication appears to be that farmers do not fight. The pacification of Iron Age society is, to a significant extent, smuggled in alongside its much more robustly argued egalitarianisation.

Since then, war, conflict and violence have remained firmly off the list of topics for discussion in much Iron Age research. They were omitted from the web draft of the recent research agenda, although partly in response to e-mail feedback, ‘conflict and violence’ rate a mention in the final published version (Haselgrove *et al.* 2001, 9), quoted above. At the seminar which led to this volume, hardly any speakers referred to conflict, confrontation, or violence between people. We heard about ‘negotiation’ (e.g. between communities), ‘competition’ (e.g. between households), and even the ‘contesting’ of the landscape, but there was no use of terms such as conflict, strife, aggression, domination, or war.¹ Violence was mentioned only in the context of a Bronze Age burial – perhaps significantly – against something inanimate!

In conversation, some participants did acknowledge that strife and warfare must have played a part in the Iron Age, but regarded this as covered by discourse centred on notions of community and negotiation. However, this is far from obvious, particularly to outsiders, to whom the focus of research appears to be firmly on other issues. It was this lack of any reference to conflict or violence that prompted me to write the present paper.

Such omissions are all the more startling when we consider the attention that violence, and particularly warfare, have recently received in other fields of prehistory (e.g. Keeley 1996; Carman 1997; Martin and Frayer 1997; Carman and Harding 1999; Osgood *et al.* 2000; Guilane and Zammit 2001; Parker Pearson and Thorpe 2005). Such works mark a widespread recognition that the later twentieth century saw a general avoidance, if not active suppression, of discussion of warfare and conflict among Western academics in various social sciences, especially among Anglophone prehistorians – a phenomenon which Keeley (1996, vii) has called

‘the pacified past’. So far, the British Iron Age is conspicuous by its absence from this renewed discourse, although we might note that the ‘pacified past’ is also a major problem in Roman archaeology, notably in obscuring the violent reality of the *pax Romana* (Woolf 1993; James 2002).

The case for peaceable societies and a review of the evidence

The question, then, is this: were the threat and the realities of warfare, conflict and violence really insignificant issues in life and society during the insular Earlier Iron Age? Were they absent, or so marginal that we can afford to omit them as ever-present factors in our models of human relations, of quotidian decision-making and practices, or as elements in ideologies, at least until the Later Iron Age when developing regional hierarchies and encroaching Roman power changed the rules?

It seems to me that no coherent positive case has been made for the *de facto* erasing of these issues from the agenda over the last decade. Rather, it relies on assertions, assumptions and, most insidiously, simple omission. Such as it is, the argument for de-emphasising conflict, violence and warfare during the Earlier Iron Age runs as follows:²

- Settlement archaeology suggests that the societies in question were relatively small-scale and egalitarian, rather than being organised into stereotypical ‘Celtic’ hierarchical, warring, warrior-elite-dominated chiefdoms.
- Along with hierarchy, the importance of armed violence is also jettisoned, partly because it is implied – without justification – that egalitarian farming communities are likely to be peaceable.

This in turn apparently receives further support from the nature of the archaeological evidence:

- Hillforts only existed in parts of Britain and need not have been defensive structures, at least in their primary purpose; moreover, some of them were apparently the result of long-term incremental construction, which seems hard to explain in military terms.

- Weapons are much less obviously significant than for the Late Bronze Age or the Later Iron Age, and for areas like Wessex are virtually non-existent.
- Pathological evidence of armed violence is also sparse and often ambiguous.

Especially in the light of the new research on prehistoric warfare outlined above, the question is: does this justify the virtual writing-out of conflict – armed or otherwise – from accounts of the period? A brief reappraisal of the evidence is called for, developing Sharples' earlier discussion (1991, 81–3) and following him in generally eschewing written sources, except insofar as they provide 'ethnographic parallels'.

What evidence might we reasonably hope for, then, to help us assess the significance of warfare and other forms of conflict and violence in the Iron Age? Have we really looked at the evidence? Does it – *can* it – give us unambiguous answers? My argument is as follows:

- The 'pacified Iron Age' depends on an unjustifiably simplistic reading of the archaeology for some areas and some periods. A comparative approach suggests that we should not necessarily *expect* to find a lot of direct evidence for violence, even if it was socially significant and relatively frequent.
- For most regions, and for some facets of violence (e.g. martial ideology and material culture), there *is* in fact considerable evidence, but this is played down, misrepresented or simply ignored. In my view, these data create a compelling case that conflict and violence were significant factors in insular Iron Age cultures.

Pathological evidence

Perhaps the least ambiguous evidence we could hope for regarding the incidence of conflict would be extensive skeletal data to examine for signs of violent injury, least ambiguously from metal weapons. However, even if armed violence was widespread, there are good reasons why it may not be easy to detect. To begin with, human remains, especially formal burials, remain notoriously

elusive for most of the island throughout the Iron Age. Even though more burials are now being identified (Haselgrove *et al.* 2001, 5), there is no real prospect of large, well-preserved and well-dated skeletal assemblages for most of first millennium BC Britain.

Even in the few areas with a tradition of formal burial, victims of violent death may quite possibly be massively underrepresented in – or even totally absent from – the archaeological record, because they were selectively disposed of in ways which would leave no direct evidence. In many societies, combat casualties, especially the vanquished, have not been accorded formal burial, being cremated, or left to rot on the surface. To the Greeks, the Galatae, for instance, were notorious for their lack of attention to the fallen – their own as much as the enemy's. After the second battle of Thermopylae in 279 BC, 'the Greeks buried their own dead and [de]spoiled the barbarians, but the Gauls sent no herald to ask leave to take up the bodies, and were indifferent whether the earth received them or whether they were devoured by wild beasts or carrion birds' (Pausanias, *Description of Greece* X, 21, 6–7). This suggests that, even where warfare involved large-scale fatalities, little or no pathological evidence might be deposited. In Italy, even the vast casualties of the Second Punic War seem to have left no archaeological traces.

The same outcome could also arise from special treatment of the weapon-slain: for ideological or cosmological reasons, those who died violently may have received funerary rites different from those who did not. Just such a distinction is recorded for the Iron Age Vaccei of Iberia: 'The Vaccei... insult the corpses of such as die from disease as having died a cowardly and effeminate death, and dispose of them by burning; whereas those who laid down their lives in war they regard as noble, heroic, and full of valour, and them they cast to the vultures, believing this bird to be sacred' (Aelian, *On the Nature of Animals*, X, 22). The possibility remains that a similar distinction was made by at least some insular societies at some periods; weapons from watery contexts may well represent elements of funerary rites for those who died in combat, or who were entitled to bear arms (Bradley 1998).

There are, then, some general reasons why we might not expect much evidence for carnage to have reached the archaeological

record, whilst the specifics of insular funerary practices further limit the likelihood of the survival of pathological evidence. However, even in the relatively limited data we do have for the Early to Middle Iron Age, there are some dramatic instances of deliberate injury and wounding, as well as dismemberment.

Much of this may indeed relate to a range of post-mortem funerary practices, constituting one element of the now widely recognised ‘otherness’ of the Iron Age. Nevertheless, a propensity to strike humans with weapons is seen from East Yorkshire (Dent 1983, 125–7; S. Stead 1991, 136–7) to Wessex. It is stretching credulity to argue that this was confined to the already dead. At Danebury, rather than solely reflecting postmortem funerary practices, the human remains attest a considerable level of deliberate killing, perimortem mutilation and exhibition of body parts (Craig *et al.* 2005). Re-examination of the human remains from Gussage All Saints (Keepax 1979) also seems to be producing significant evidence for interpersonal violence, as distinct from post-mortem processes and rituals (R. Redfern pers. comm.).

The pathological evidence remains relatively thin and sometimes ambiguous but, where it exists, it is hardly a ringing endorsement of a violence-free world. It is surely beyond reasonable doubt that some people were being wounded and killed, whether through combat, crime, judicial punishment, or other processes such as human sacrifice (Aldhouse-Green 2001). All we really need argue about are the degree and significance of this violence, which some seek to play down. At the Durham seminar, Mel Giles sought to explain the shoulder wounds on a number of East Yorkshire skeletons as blows ‘not intended to kill’. It is more plausible that these injuries reflect lethal intent: shoulder wounds are a very high-risk way of acquiring prestige duelling scars. However, if she is correct, this seems to me good evidence for the *ideological* importance of combat.

Weapons

By comparison with the preceding or succeeding centuries, during the Early Iron Age, weapons are much less prominent in the archaeological record, both in number and diversity, apparently providing further grounds for playing down the significance of

warfare at this time. Sharples (1991, 82) argues that, in the Early Iron Age, weapons more sophisticated than the sling virtually disappeared, at least in Wessex, and that they reappeared in the Late Iron Age (*ibid.*, 82; 84).

It is however a fundamental tenet of the 'new Iron Age' that archaeological deposits are not random rubbish providing us with anything like a representative picture of the full repertoire of artefacts or of social praxis. Artefacts were deposited largely, perhaps overwhelmingly, as the result of deliberate action, involving careful selection according to specific ceremonial and/or religious practices. Indeed, metal artefacts of *all* categories are much more rarely preserved from the Early Iron Age, than in either the preceding or succeeding period, including key tools like axes (Sharples 1991, 82). Unless we are to argue that metal tools also dropped out of general use, we can conclude that the relatively small number of preserved weapons is more likely the result of generally reduced archaeological visibility of *all* metalwork due to changing practices, and especially rates, of deliberate deposition. Numbers therefore tell us next to nothing about the degree of circulation, bearing, or use of arms.

Taking a comparative approach, it is important to realise that many cultures, including overtly martial societies, rarely or never deposited military equipment in contexts likely to be preserved archaeologically. We possess remarkably little by way of Roman arms and armour from the entire history of either the Republic or the later Empire (Bishop and Coulston 1993; Feugère 1997; Oldenstein and Gupte 1999). From this standpoint, it is not the apparent meagreness of martial material culture attested in the British Earlier Iron Age which is remarkable, but its relative abundance in the Late Bronze Age and the Later Iron Age – and indeed in the early Roman and early Anglo-Saxon periods. In this respect, the Earlier Iron Age may be seen as 'normal' in yielding relatively little martial hardware.

It is also salutary to note indications that the martial and related artefacts in our possession are the tips of an otherwise-unseen iceberg. Even for the relatively artefact-rich Later Iron Age, single finds continue significantly to alter our perception of the nature and development of the island's military material culture repertoire. In

the last couple of decades, the first unambiguous example of a continental-pattern oval shield has been found in Britain, at Chertsey (Stead 1991a, 1–10), and an apparently southern British concave-ended shield type has been recognised through an example from Deal, models in the Salisbury hoard, and edge bindings from other sites (Stead 1991a, 10–21; 1995, 64–72; 1998). East Yorkshire, in addition to splendid swords, has produced a surprisingly early iron mail shirt (from Kirkburn: Stead 1991b, 54–6), whilst the moulds found at Weelsby Avenue, Grimsby are for terret types of which no actual examples are known (Foster 1996).

This indicates that we are far from possessing a representative sample of martial material culture, even for Middle to Late Iron Age metalwork – consistent with the hypothesis that there was a significant repertoire of types, and a large numerical population of martial artefacts, throughout the Iron Age. Most types rarely, if ever, reached the archaeological record. For the Iron Age, non-deposition is surely as significant an issue as, and much more intractable than, special deposition.

Whether or not these arguments are accepted, the fact remains that, throughout the Early Iron Age, weapons continued to be made, prized and deliberately deposited across large areas of Britain, particularly in aquatic contexts. Furthermore, these were versions of Hallstatt C swords, Hallstatt D daggers, and La Tène I swords (Bradley 1998, 155–89), items not plausibly explained as equipment for vermin control or hunting. For some groups, at least, weapons – and probably also associated masculine values of fighting prowess – continued to be important facets of ideology. This may be seen as one of a number of notable areas of continuity of practice across the Late Bronze Age–Early Iron Age divide (Haselgrove *et al.* 2001, 25). Weapons such as swords may well have acquired multiple additional meanings, conveying authority, status, or mystical power to transform the world. But their primary function and significance remained the power to maim and kill human beings.

Given the caveats noted above, it is not obvious to me that we can conclude that weapons were less important during the Earlier Iron Age than before or after. While there may well have been a smaller range of less elaborate weapons, this is no guide to the significance of armed combat. Indeed, it would simply be consistent

with the relative egalitarianism of the period implied by the settlement archaeology. This could well have resulted in more 'democratic' participation in the bearing of arms. It may also reflect more limited resources available to individual participants to expend on weaponry.

In my view, the greater depositional frequency and relative gorgeousness of many items of armament in the Later Bronze Age and Later Iron Age were a function of their importance for status display, reflecting the greater distinctions of wealth and rank that existed at those periods more than changes in the importance of bearing weapons *per se*. Indeed, plain and simple weapons may have been the cultural *preference* of the more egalitarian societies of the intervening centuries. It is noteworthy that, even during the increasingly autocratic empire, Roman soldiers retained ideological principles developed in the Republic, exhibiting a strongly egalitarian corporate masculine identity, which even emperors were obliged to adhere to as good *commilitones* ('fellow soldiers'). This martial identity was expressed materially in consciously plain and simple military attire, a kind of ostentatious austerity; bright colours and embellishment were for barbarians and women (James 1999).

A case can be made, then, that the sparseness of Earlier Iron Age insular martial material culture is more apparent than real, the result of (non-)depositional practices which are, taking the long view, 'normal' for Britain and some parts of Europe. Britain in the first millennium BC was probably generally armed for combat, perhaps heavily. Yet we might still ask why, even where they do exist, are unambiguously martial symbols like Hallstatt and Early La Tène swords now commonly ignored? Here is a prime example of how 'the potential of material culture to contribute to our picture of Iron Age life remains under-exploited' (Haselgrove *et al.* 2001, iv). In part, this reflects the recent turning away from metalwork and 'art', in reaction to the overemphasis on such material in the earlier Celtic warrior paradigm. But is it not also because such material is uncongenial to much 'different Iron Age' discourse?

Hillforts

'Hillforts' remain central to this debate – where they exist, for of

course large parts of Britain lived without them. It is now fairly generally agreed that these monuments represent a complex, multifaceted phenomenon, too diverse for us any longer to think of them as a unitary class, better treated simply as ‘notfarmsteads’ (Hill 1995a, 52). They cannot all be seen as proto-castles or refuges, and their archaeology is no longer easily explicable in terms of elite residence or social dominance. Their construction – incremental over long periods rather than quickly to a unified plan in response to imminent threat – is often inexplicable in terms of simple defensive functionality, and there are good indications that visual display, and cosmological considerations, were prominent in their design (e.g. Sharples 1991, 83). They are now more often seen as symbolic centres of community, perhaps places of periodic fairs, festivals, and gatherings.

I have no argument with any of this important work, which marks a major step forward in thinking about such sites. It does seem to me, however, that revisionism goes too far when it proceeds not just to play down, but in practice simply to ignore *any* possible martial aspect to these places. For example, in their recent analysis of the chronology, topography and purposes of 44 hillforts in south-east England, Hamilton and Manley (2001, 8) note that the defensive interpretation has been ‘strongly challenged’ by Hill and others, although they do not claim it has been definitively disproved. They nevertheless then proceed to omit it entirely from their discussion.

Many societies did create major communal monuments which were obviously not defensive, such as pyramids or mounds, or, closer in time, enclosures with the bank on the outside like the hengiform ‘royal’ centres of Iron Age Ireland (Raftery 1994, 64–81; Armit 2007). It remains a fact, however, that the major monumental sites of much of Early Iron Age Britain *were* places surrounded by practical circuits of rampart and ditch which look like – and were probably intended to function as – defences. This need not in any way contradict the idea that they were also, or even primarily, intended to be symbolic representations of community identity. The martial, the communal and publicly symbolic, the religious and the ritual, are not mutually exclusive, especially when it comes to settlement boundaries and enclosures, as the *pomerium* surrounding ancient Rome makes clear (Rüpke 1990; Woolf 1993, 173–4).

However, the form ‘hillforts’ took indicates that, to a significant degree, group identity continued to be framed in terms of martial values.

We need not be surprised if signs of attack on such sites prove elusive. Their military role may have been as deterrent, with small expectation they would actually undergo attack. If, as is likely, ‘war’ consisted of raiding and small-scale, more-or-less ritualised, group combat, then the creation of defensive circuits may have been a way of creating ‘safe havens’, placing people and resources *beyond* the scope of ‘legitimate’ or practical warfare. Archaic Greek and Italian conflicts provide an instructive parallel. Here assaults on, or sieges of, fortified centres were rarely attempted, nor even a usual war aim; raiding of farmlands and pitched battles in open country constituted the accepted modes of war, although these could in themselves cripple some city states (Hanson 1999). Rome’s actual destruction of Veii in the 390s BC was dramatic because it was exceptional.

In keeping with the suggestion of employing local ‘ethnographic analogies’ for thinking about Iron Age Britain (Haselgrove *et al.* 2001, 18), there is one class of monument in this island and neighbouring regions that may provide an informative parallel for thinking about hillforts. Like many hillforts, they were defined by an earth and timber enclosure surrounded by external ditches, pierced by multiple entrances, and were orientated, often literally, for symbolic and cosmological rather than topographical reasons. These places, too, could accommodate major reserves of food, and were often thinly and/or seasonally occupied. Their purpose was multiple: providing periodic accommodation to large numbers of people, they were intended to symbolise the power of a polity, and also helped to express that community’s identity, while facilitating internal control. They did also have specifically martial functions, but their enclosures were *not* designed or expected to withstand determined, mass attack; on the rare occasions that they were besieged, it was the result of something going seriously wrong in warfare elsewhere.

Their design was based on a mix of practical and ideological considerations. Firstly, it assumed that likely antagonists were normally too few in number to pose a serious threat of assault.

Secondly, it assumed that these foes did not generally practice siege warfare. Thirdly, the builders themselves had a highly aggressive martial ideology. To skulk behind defences was almost literally unthinkable. If an enemy was to be confronted, he was to be attacked on his own ground with great ferocity. In their martial aspect, such enclosures were primarily places of preparation and assembly for warfare that was conducted in the open. In case you have not already guessed, I am describing early imperial Roman ‘forts’ (or, more accurately, military bases) in northern Europe. It may be that many British societies constructed ‘hillforts’ for a similar mix of reasons – including such direct and indirect martial motives.

We may agree, then, that many ‘hillforts’ were complex, multi-purpose enclosures, but the evidence is consistent with *one* of those purposes often being military, albeit primarily deterrent. Their existence, in my view, provides clues to possible regional patterns of conflict, but their absence from other regions does not suggest a lack of warfare there, but rather different patterns of warfare – for a number of hillfort-free regions tend to have other martial archaeological correlates: deposited weapons.

Overview

Taken separately, elements of the evidence discussed above might be explained away. *Cumulatively*, however, there is a persuasive case for widespread physical conflict in Earlier Iron Age Britain. Its inhabitants were equipped for combat and exhibited a significant martial aspect to their ideologies. It is implausible that this was purely for show, and did not impinge on human interaction, through threat and acts of violence. Our limited pathological evidence is consistent with considerable levels of interpersonal violence. The data may seem relatively limited but, especially when consideration is given to issues of survival and selective deposition, the case is at least as strong as for the contrary view of a generally disarmed and pacific mid first millennium BC.

However they may be explained, the complementary distributions of hillforts and weapons (Sharples 1991, 82–3) means that most regions of Earlier Iron Age Britain have some martial material. There may be relatively little actual evidence of warfare *per se*, at

least until the Later Iron Age but, as we have already seen, the field of ancient warfare provides classic examples of that hoary but fundamental rule, 'absence of evidence is not evidence of absence'.

A spectacular example of this is provided by the Italian peninsula, which has produced virtually no direct archaeological correlates of the effectively annual wars of the early Roman Republic. Our detailed knowledge of particular events mostly comes from documentary sources such as Livy, while martial ideology and practices in contemporary Italy are further elucidated by representations such as Etruscan and Lucanian wall paintings and figured ceramics (e.g. Pontrandolfo and Rouveret 1992; Schneider-Herrmann 1996; Pontrandolfo *et al.* 1998), and extensive finds of weapons in non-Roman graves (Adam and Rouveret 1986). Of course, equivalent sources are largely or entirely absent for the British Iron Age.

On an even larger scale, the Roman conquest of 'barbarian' Europe is largely invisible archaeologically until the first century AD, when the military elaborated its practices of constructing winter quarters, and began building the familiar 'playing-card forts'. Before that, we can usually only 'see' these wars archaeologically in the context of a few major sieges, as at Numantia (Schulten 1914–31; 1933) or Alésia (Reddé and von Schnurbein 2001). Returning to Britain, it is salutary to remember that Caesar's campaign of 54 BC – covering a sizable area of south-east England and involving tens of thousands of combatants – has yet to produce any identifiable archaeological trace. Direct traces of warfare, then, are usually pretty elusive, so their apparent scarcity in Iron Age Britain is not especially significant. On the other hand, I would challenge anyone who disagrees to cite examples of pre-modern societies that invested in prestigious weapons and/or fortifications, yet which did not actually use them.

Even if the period truly was characterised by relatively egalitarian societies, it does not follow that these were necessarily, or even likely to be, peace-loving in their internal or external relations. If Diodorus is to be believed, the Vaccei of Iberia again provide an ethnographic parallel. They were reported to be fiercely egalitarian:

'this people each year divides among its members the land which it tills and making the fruits the property of all they measure out his

portion to each man, and for any cultivators who have appropriated some part for themselves they have set the penalty as death' (Diodorus Siculus V, 34, 1–4).

At the same time, their funerary practices (see above) reflect their strongly martial ideology. And as Richard Bradley reminded us at the Durham seminar, Classical texts describe early Germanic peoples as regulating class distinctions and access to land in much the same way (Caesar, *Gallic War* IV, 1; VI, 22; Tacitus, *Germania* 26). Yet these possessed a fearsome reputation for warlike behaviour. It must be emphasised that Hill is careful to argue that his Wessex Iron Age societies, of largely autonomous and autarchic households with very loose overarching organisation, may have been considerably different from these Germanic polities (at least as Marx conceptualised them: Hill 1995a, 51). Nevertheless, whilst these Wessex societies – if they were so organised – may indeed rarely have practised *organised group* violence on anything like the scale we (or they) would call warfare, this certainly does not mean that they were peaceable, and free of social strife or mayhem, including lethal armed violence. Which brings us to some crucial issues of concept and definition.

Beyond 'war and peace'

I was tempted to subtitle this paper 'Give war a chance' (with apologies to John Lennon, and thanks to P.J. O'Rourke 1992), but that would be misleading. It would fall into the error, which has, I think, dogged this debate, and which I deliberately left unchallenged up to this point. It would reinforce the widespread existing rough equation of interpersonal physical conflict and armed violence with war, a mis-perception shared by traditional 'Celticist' treatments and much post-processual writing. On reflection, we all know perfectly well that these terms are often far from being coterminous. I would argue that this is a key indicator of how far archaeologists are from properly theorising conflict and violence. Because the entire area has been so neglected in recent years, we lack a proper conceptual terminology with which to describe and explore it. Where discussed at all, a simplistic, basically presentist framework is applied.

There has been some attempt to define war. Sharples (1991, 80)

adopted Ferguson's useful definition, 'organised purposeful group action, directed against another group, that may or may not be organised for similar action, involving the actual or potential application of lethal force' (Ferguson 1984, 5). Peace is also referred to, yet there has been no equivalent effort to define what we mean by this, and no discussion of how the two states might relate to each other; peace is taken simply as the absence of war. Recent discourse seems to me to constitute a simplistic back-projection of our own cultural expectation; that the default state of society is peace, sometimes punctuated by episodes of an abnormal alternate state called war. Even for our own society, the utility of this abstraction is dubious, as is apparent from the 'Troubles' in Northern Ireland and their intermittent violent consequences on the 'mainland'. Has this been war or peace? What is, and is not, war; and what constitutes peace; remain to a large extent matters of perspective.

For the Iron Age, violence and war are ignored or at most played down and treated as a temporary aberration from 'normal' social interaction – within as well as between groups – which is portrayed, largely implicitly, as basically peaceable. So, for example, when topics such as the establishment of rights to land and resources are discussed, or the development and maintenance of identities, the term currently in vogue is 'negotiation'. During the earlier first millennium BC, groups 'negotiated' their identities, and each other's rights to land, apparently peacefully. To me, this seems implausible, and I wonder if there are any documented parallels for such co-operative behaviour – or is Early Iron Age Britain truly unique in this?

Negotiation is a valuable concept in thinking about human interactions, but it is not a neutral one: it is double edged. On the positive side, it recognises that both parties to social interactions should be regarded as active agents, even if the power relations are not symmetrical. A good example is its application to revised understandings of the process of cultural interaction between Rome and indigenous societies. This is no longer seen as simple, unidirectional acculturative 'Romanisation'; the conquered – or at least their elites – are now seen as knowing agents actively engaging in the creation of provincial cultures (e.g. Millett 1990; Terrenato 1998; 2001).

Beyond a certain limit, however, the concept of 'negotiation' ceases to inform, and becomes a dangerous euphemism. We all know that 'negotiation' is used to describe situations in which power relations between the parties are highly asymmetric, as in the case of the Israelis and Palestinians. Here, 'negotiation' is urged on the two parties to seek 'peaceful agreement', even though in reality one has its boot on the throat of the other, which it treats with a brutal disregard that in other circumstances would see it bombed by third parties. The West averts its gaze from the real power relations and the true nature and extent of violence (symbolic as well as physical) in this conflict. It seems to me that, in archaeological use, the apparent detachment, neutrality and 'fairness' of the term 'negotiation' tends to de-emphasise and divert attention from such unpleasant but common realities in the past in exactly the same way.

In Early Iron Age Britain, control of land may routinely have been established by dominant groups or individuals intimidating and coercing the weak, through overt or implicit threat of violent force. This could still be regarded as 'peaceful negotiation', as was enclosure of common land 'by agreement' in post-medieval England, a procedure which certainly involved domination, the threat of physical coercion, and acts of resistance (Frazer 1999). For the first millennium BC, 'negotiation' of control over land was probably closer in spirit to the Late Bronze Age land boundary killings of Tormarton (Knight *et al.* 1972; Osgood 2000, 21) than to modern conference table sessions.

The use of the term 'negotiation' is an example of how current archaeological discourse is tending to sanitize the past, just as military euphemisms like 'ordnance', 'delivery system' and 'collateral damage' are sanitizing reality in the present. It is not just warfare, then, which has been effectively eliminated from mainstream discourse on the Iron Age, but apparently all forms of intercommunal and even interpersonal strife. Almost nothing potentially disagreeable to early twenty-first-century Western liberal sensibilities rates a mention. Violence in particular, and social conflict in general, have become the new taboo, largely slipping into the invisibility of *doxa* (Bourdieu 1977, 168–71). There has been a general sanitization of the Iron Age, particularly of its earlier

centuries. How and why has this happened?

There are a number of apparent reasons for this shift. The great expansion of field research in Britain, combined with post-colonial reappraisal of peoples hitherto regarded as primitive, helped bring about a major shift from 'top-down' to 'bottom-up' appreciations of early societies, leading to a just emphasis on their skill, sophistication and talents. Increasing understanding of Iron Age rural settlement and farming practices, made especially vivid by the late Peter Reynolds' Butser project (1979), resulted in an utterly different impression of the period, foregrounding fields and farming families instead of warriors and hillforts.

The new perspective, because it was largely a product of processual archaeology – with its emphasis on how societies work as systems – left little space for discussing where they *don't* work (or where they may actively work through conflict; see below), whilst the now-dominant post-processual discourse – for all its professed interest in power and agency – has tended to stick to rather impersonal, detached and abstract language when discussing ancient societies, and is equally reluctant to address violence. As a result, 'less by sustained argument than by studied silence or fashionable reinterpretation, prehistorians have increasingly pacified the past' (Keeley 1996, 18).

There is of course a wider cultural context for all this. It may be seen as the result of a longer-term trend in the West through the twentieth century, a growing public rejection of violence and increasing distaste, especially among the educated, for thinking about brutal activities like warfare (Sharples 1991, 79; James 2002). At a much more local level, I wonder whether some practitioners are attracted to the Early Iron Age because they find its *apparent* lack of social elites and/or its *apparent* lack of war and nastiness, politically and emotionally congenial – just as, by contrast, the Roman empire and its military has tended to attract those with a background in the old colonialist establishment, ex-officers or would-be warriors (James 2002).³

Whatever the precise causes, Early Iron Age Britain has seen a switch from emphasising warlike, but romantic barbarians to promoting peaceable farmers as the central motif. The question remains: is this change truly consistent with the evidence, or is it

little more than a shift in back-projected cultural values? To stand any chance of finding a clear answer, we need first to make a more direct effort to understand the nature and role of conflict, violence and warfare in human societies.

The dark side of life: insecurity and violence

We need to confront the euphemisation of the Iron Age past. To begin with, it seems necessary to remind ourselves that life in the past was no Shangri-La. Iron Age communities in Britain grew up in a world of rich traditions, and practised skills often to virtuoso levels resulting in cultural achievements that impress us today, and we may assume that many individuals knew times of joy and personal contentment. Yet, as for most peoples and places, we may be equally sure that the routine experiences of life involved levels of physical and psychological pain which are hardly imaginable to most of us. We can assume that many suffered terribly from physical conditions which are now simply curable.

Most people's lives will have been punctuated by the witnessing of death – premature, accidental, often violent – if only at the hands of nature: in childbirth, infancy, childhood or the prime of life, from injury, infection or disease. Active engagement in bloodshed, killing and dismemberment, at least of domestic animals, will have been commonplace. Furthermore, treatment of the human dead, if not the living, often included acts which appear bizarre to us, including beheading and other forms of dismemberment little distinguishable from animal butchery. By our standards, even if we disregard the question of interpersonal violence, life was harsh and often brutal. I also suggest that, unless we can show otherwise, we must *expect* that many people were actively harsh and brutal to others.

Historical, ethnographic and other archaeological evidence suggests that the overwhelming majority of known human societies have indulged in warfare (Sharples 1991, 80; Keeley 1996). There are some largely 'warless' societies, e.g. Inuit groups, or the !Kung of Southern Africa, but even among these groups, there are (to us) high, if highly variable, incidences of inter-personal violence and/or homicide. Virtually no truly strife- and violence-free human society is attested (Kelly 2000, 11–39). There is a crucial point here: forms of physical conflict and violence *other* than warfare are all but

universal, and may be more important than war in some societies. And, it will be argued, there is reason to think that different forms of violence are frequently significant factors in the shaping of societies; they do not simply represent aberrations interrupting 'normal' peaceable social interaction, but are often – usually – integral to social identity and organisation, ideology and action.

In recent years, the many faces of violence have been a significant focus of research elsewhere in the social sciences, especially in anthropology (e.g. Riches 1986; Haas 1990; Clastres 1994; Aijmer and Abbink 2000; Schmidt and Schröder 2001a). As we saw above, such research has begun to have an impact elsewhere in prehistory, but not yet, it seems, in British Iron Age studies. The spectrum of physical violence, of which war is just one aspect, can be seen as constituting only part of a much wider range of human action through which people commonly confront and attempt to intimidate, coerce or restrain each other. While specific cultural patterns appear to be almost infinitely variable, alongside altruism, kindness and co-operation, human societies virtually without exception engage in inter- and intra-group confrontations, and power struggles. At scales from the household to the polity, most societies manifest attempts at domination at least as significant as processes of co-operation and negotiation. These may focus around distinctions in various dimensions of social organisation, not least ethnicity, hierarchy and gender (Miller *et al.* 1989; Bourdieu 2001).

Domination may be sought primarily through psychological, verbal and/or symbolic actions. The dominant often seek to legitimise asymmetric power relations by rendering them apparently natural and inevitable, making the alternatives invisible and literally unthinkable. Such 'symbolic' or 'structural' violence, which involves routine humiliation of subordinate groups, may be much more significant than direct intimidation or physical violence. Even if they do not initially deploy acts of physical violence or homicide, systems of domination often include implicit or overt threats to do so, especially as they are usually met with some degree of resistance. Escalation may then precipitate actual violence, up to the scale of organised warfare and, on occasion, genocide.

These struggles, attempts at domination, and acts of resistance

involve a wide range of human practices and strategies, of which physical violence constitutes only a part. And physical violence itself spans a very wide range of forms and contexts, only a part of which constitute 'warfare': other categories include domestic, criminal, juridical and religious violence. It should of course be noted that such categorisations, arguably including acts of warfare, are themselves context-dependant, presupposing societies organised to a certain scale or level of complexity (see below).

Despite the almost infinite variability of human polities, domination, coercion and violence, are virtually always elements of culture too important to ignore. We need to incorporate the probability of their existence into our models of how prehistoric human societies worked – or detailed justifications must be made as to why, for particular social contexts, they are not significant.

Warfare, then, may be contextualised as only one aspect of a wider spectrum of physical violence. A fixation on the importance of warfare diverts attention from many other categories of interpersonal mayhem, from one-on-one and small group engagements ranging from brawling to duelling, assassination and murder, to juridical and religious violence. Not least, it leaves out domestic violence, which can be hugely important. These aspects have received little attention in mainstream thinking about the British Early Iron Age, beyond a couple of brief observations. Dent (1983, 127) suggested that, besides being the result of war, weapon injuries 'could equally well result from civil penalties or from violent attacks in peacetime', whilst Sharples (1991, 81) noted that 'violent death does not necessarily indicate warfare, it can be the result of punishment or religious sacrifice'.

To discuss interactions within and between groups we need to develop a framework and vocabulary that takes overt account of the possible deployment of diverse strategies of coercion and violence. At the moment, no such framework exists. To start with, we need to re-examine some of the basic concepts, such as the notion of peace and war as *exclusive* states of society, or of conflict and violence necessarily being seen as abnormal or morally reprehensible by the societies concerned. In addition, we need to consider how these areas may best be addressed archaeologically.

Rejecting both Hobbes and Rousseau, it may be best in many

cultural contexts to think not in terms of a 'war : peace' opposition, but of *three* states of relation between – and often within – polities. On this view, the 'default situation', pertaining most of the time, is neither peace nor war as we understand the terms, but endemic/chronic insecurity, in which individuals, small groups, or sectors of the polity face a constant risk of violence. From this state, 'peace' and 'war' are distinct conditions, which require active choice, collective agreement, organisation and effort to implement and sustain. War requires that armed forces are marshalled, motivated, supplied and led. Peace requires *active* suppression of violence and 'disorder' within the polity to establish and maintain 'civil order'. Peace, often codified through some form of law, is *enforced*; or, to look at it another way, the exercise of armed violence is a right increasingly abrogated to central authority and jealously guarded. That peace must be actively maintained is to be seen in our own society: our laws still retain the notion of a 'breach of the peace', preserving the medieval idea of 'the King's peace'. War and peace are, on this view, *both* conditions presupposing social organisation and collective action at scales larger than the household.

Good historical examples of such a 'three-state' social world are to be found in first millennium BC Italy. Before conquest and unification under Rome, it appears that the default relationship between polities was implicit hostility, a lack of mutual security that could erupt into war. Crudely, unless a specific treaty established mutual peace or alliance, members of the other polity were 'fair game'. Violence could escalate into raiding or full-scale battle. Full warfare, however, was not simply something requiring organisation; it was also a special state that, like peaceful relations, required formal declaration. War and peace *both* needed proper legal and divine sanction (Rüpke 1990).

For egalitarian and other small-scale or loosely organised polities, a simple war : peace opposition may be of little conceptual value since they tended to lack the social institutions which could sustain either state, *sensu stricto*. Insecurity – some risk of physical danger from others in the absence of reliable peace as well as organised warfare – has always been a common experience of human life even in states, and was probably the norm in Earlier Iron Age Britain. For the atomised, household-based societies of Iron Age Wessex, if they

existed, it may well be meaningless to speak of acts of war, and indeed of states of peace or of criminal and judicial violence. That does not however mean that mayhem was absent, simply that more appropriate labels are required for it, if (when) it occurred. Whilst there is clearly more to be said on these issues, I would suggest that the baseline state for Early Iron Age life in Britain is better conceptualised as one of endemic insecurity, than of 'peace'.

Conflict and violence: transformative as well as destructive

If physical conflict of various kinds was common in the Iron Age, what were its effects? Anthropology suggests that these were probably more complex than is usually thought, and may be more unpalatable to us than the widespread implicit assumption that they are solely destructive, disruptive occurrences of peaceable normality. Ethnographic and historical studies suggest that, in some respects, conflict and violence are transformative, and may be creative as well as destructive. Experience of violence – witnessing it, inflicting it, and not least suffering and surviving it – can be a major force with enormous power to shape societies; to maintain social boundaries and group identities; and to develop understandings of the world and of other peoples (Bowman 2001; Schmidt and Schröder 2001b). In short, conflict and violence were probably key forces in the creation of many – probably all – of the Iron Age societies known to us. This unpleasant possibility is something we must deal with.

Many western academics tend automatically to regard conflict and violence in pathological terms, as signs of societies 'not working properly' or breaking down. If societies 'lose control' of them, they may be symptoms of dysfunction or causes of collapse. However, we need to be aware that, even in Western culture, such views are a recent development, and by no means universally accepted. For example, in the United States, while crime is seen in such terms, other aspects of violence are widely sanctioned by society, from the individual right to use lethal force in defence of private property, to the right of the state to engage in judicial killings, or the perpetration of unprovoked military aggression against perceived external enemies to pre-empt alleged 'potential threats'. This

illustrates how, if kept within agreed rules, levels and contexts, engagement in conflict and acts of violence have often been seen as evidence for the successful growth and maintenance of a prevailing order against the encroachment of disorder, and not as dysfunctional – at least from the viewpoint of insiders.

In most historically attested societies, certain forms of violence have been seen as inevitable and ‘natural’ – like flood or famine, to be faced with resignation – or were actively socially sanctioned, and seen as heroic and exciting. They were at least normalised, and often regarded as positive aspects of the routine functioning of societies. This may include everything from attitudes to domestic and juridical violence to religious sacrifice and *successful* external warfare. Such dominant discourses have frequently been internalised to some degree even by many of their victims, e.g. women and slaves.

Conflict can itself become a part of the way in which societies *do* work, in their own terms. Some societies, not least Rome, placed a high *internal* social value on *externalised* martial violence; successful foreign wars were key sources of wealth, prestige, power and, eventually, new citizens (Hopkins 1978; Harris 1985; Lintott 1999). So long as catastrophic defeats and genocide are not experienced, polities may regard war not simply as inevitable (fearing the real or supposed aggression of neighbours) but as something necessary and important to the reproduction of society, even if they do not overtly glorify it as true ‘warrior societies’ may. Consider the varied attitudes of ancient Greek polities to engagement in warfare. From the time of Homer, through the supremacy of Athens and Sparta to the era of Alexander, this tended to vary between routine expectation of combat and extreme aggression (Van Wees 2000).

It is easy to see how violence could be positively valued by powerful social groups. But counter-intuitively, the same can be true for societies that fall victim to the aggression or domination of more powerful neighbours. For them, the impact of violence, even if it falls short of total genocide, is frequently utterly devastating and permanently traumatising for individuals and groups of survivors. However, for survivors and witnesses it may also have other, more ‘positive’ effects. Oppression and violence endured and survived can be key to the *creation*, definition and maintenance of group

identities, not least political, national and ethnic identities, as has been exemplified in the last sixty years by post-Holocaust Jews/Israelis, and Israeli-oppressed Palestinians (e.g. Peteet 1994).

To summarise, coercion, conflict and violence may be major transformative social forces, destructive of course, yet also shaping new social phenomena, not least through triggering creation or redefinition of ethnic, political, gender or other identities. Violence therefore possesses an intimate, perhaps inextricable, relation with another major theme of contemporary scholarship: the archaeology of identity.

Archaeological correlates

Unsurprisingly, the archaeological treatment of violence is still in a relatively rudimentary stage of development, precisely because the theoretical and methodological revolutions of recent decades passed it by: only now is it catching up. The shortcomings of the evidence we have, and some of the inherent methodological difficulties in dealing with the archaeology of violence, were outlined above. There are however grounds for some optimism, since the data are far from inconsiderable.

We may seldom be able directly to 'see' conflict or physical violence in the archaeological record of Early Iron Age Britain, but we may be able to detect them more often than is usually thought, notably through careful pathological study of available human remains. We can also identify much evidence which indirectly attests the prevalence and symbolic importance of conflict and violence during the period, e.g. in the creation and layout of settlement sites, and in the manufacture, embellishment and treatment of artefacts of physical violence.

If new interest and research can be fostered, we can hope for new perspectives on existing data and the development of new avenues of enquiry. All this promises that we are at least as likely to be able to say something worthwhile about issues of conflict and violence as about other areas which have received considerable attention in recent years, such as cosmology or gender; and possibly more than we will ever be able to say about ethnicity.

Conclusions

Were the societies of Earlier Iron Age Britain really peaceable in their interrelations, to all intents and purposes free of conflict and violence, as current discourse seems to assume? For me, this picture of the period seems peculiarly bloodless in both senses: literally, in excluding or ignoring the likely significance of human conflict and violence; and figuratively, in presenting an anaemic view of humans and their actions, implausible in terms of virtually any known society.

Notwithstanding the enormous variability of human culture (itself a highly noticeable characteristic of the insular Iron Age), in my view there remains a basic uniformity to human nature – by which I mean emotional capacities and behavioural potentials within which culture has scope to work.⁴ The resulting cultural patterns, albeit to varying degrees according to socialisation and opportunity, seem always to encompass greed, aggression and brutality alongside generosity, kindness and co-operation. I see no reason to regard later prehistoric Britain as an exception.

Interpretation of Earlier Iron Age Britain is still not greatly ‘data-inhibited’ (Haselgrove *et al.* 2001, v). The evidence of physical violence, let alone for symbolic expressions of dominance and coercion, is thin and ambiguous enough for us to impose almost any favoured interpretation on it. Nevertheless, when taken together, the evidence of artefacts, pathology and settlement creates a strong cumulative case for the widespread practice of physical violence, and the ideological valuing of martial skills and material culture. Further, comparative evidence from ethnography and history, data from elsewhere in Iron Age Europe, and from adjacent time periods in British prehistory, lead us to the default view that conflict and violence were significant, normalised, and probably routine elements of life in Britain throughout the first millennium BC, even if their incidence varied regionally through time. Recognising this does not require us to see insular Iron Age polities as ‘warrior societies’ *per se*: there is no need to bring back the Celtic paradigm. Rather, we need to understand the meaning of this evidence in its local context.

Why, then, are these aspects absent from our conceptions of the Iron Age? Hill has rightly noted the rarity of overt attempts to describe the possible structure of Iron Age societies; the bold vision

of a 'different Iron Age' of which he is a key exponent is very important and gives us something concrete to argue around. However, we surely need to think more about the inner workings and interrelationships of the societies of the 'different Iron Age'; even if areas such as conflict and violence are hard to investigate directly in the archaeological record – although no less so than others like cosmology which have been extensively discussed in recent years. We certainly need more and better evidence to investigate these issues, but above all we need to develop a theoretical framework to deal with them, drawing on, and contributing to, the wider recent renewed academic interest in conflict and violence in the past.

We should also reflect further on why the 'pacified Iron Age' came into being. In arguing for the practice of war in Iron Age Wessex, Sharples (1991, 79) noted the role of the wider contemporary cultural context, but was at pains not to criticise archaeologists for ceasing to discuss conflict and warfare. Since he wrote, the silence has become ever more deafening, so direct criticism is justified. Today, we are supposed to be reflexive, examining our standpoints and biases in a way that we like to believe is a genuine advance on the largely unstated assumptions and cultural prejudices of our intellectual forerunners.

As a matter of course, we should consider whether the contemporary cultural/political climate has prejudiced and distorted revisionist conceptions of the Earlier Iron Age, just as we believe that of recent centuries conditioned the Celtic paradigm. We should certainly do so before criticising scholars who wrote the former heroic, martial Iron Age for wishful thinking and being unduly influenced by outside cultural trends, as some researchers did in open discussion at the Durham seminar. What, it was asked to general mirth, were those people watching on television as kids? There is a danger in this, of self-satisfaction at our superior wisdom in the light of the explosion of data and theoretical insights of the last few decades, and alarmingly little sign of the self-critique that is essential if we are to write histories with some connection to past realities, rather than spinning new fantasy Iron Ages which we find congenial.

I strongly suspect that political and emotional prejudices are

playing a much stronger role in shaping current conceptions of the Iron Age than most would care to admit. How far is the pacification of the Earlier Iron Age the result of following post-colonial sentiment in distancing ourselves from our own imperialist past, identifying instead with idealised ‘pre-colonial contact’ cultures? Significantly, discussion of domination, resistance and power is much more noticeable in the context of the Late Iron Age. Whilst the nature of the material culture, ranging from rich burials and prestige imports to dynastic coinages, makes these issues easier to document – and harder to ignore – I do wonder how far it is because these changes can be attributed to (and blamed on) encroaching Roman imperialism, which some researchers in this field look on with undisguised loathing. This may, then, in part be about gut feeling, about personal emotional predispositions. When pressed, one seminar participant admitted that she did not *like* [sic] to think of the Iron Age people she was studying as being aggressive towards each other. Scholars have been tempted to idealise the past for escapist purposes at least since Livy (*History* I, 1). Exploring our own motivations for choosing the cultures and periods we study, and the ways we like to think of them, is something we all need to do.⁵

Some appear to argue – or at least implicitly assume – that Early Iron Age Britain was an island (in time as well as space) of polities exceptional in their abilities to work by co-operation and to resolve conflicts peacefully. The onus is surely on these scholars to prove their viewpoint, or set out a reasoned argument why social strife is unlikely to have been a routine feature of the period. If the peoples of the time were not such paragons, we do their memory no service by ignoring aspects of their cultures that we see as negative. Paradoxically, ‘pacifying the past’ actually denies full humanity to our ancestors (Keeley 1996, 170–1).

Pacification of Iron Age Britain has resulted, I would argue, in a new image of the period as misleading as the old stereotype of heroic warriors imbued with ‘Celtic Spirit’, critique of which was one of the starting points for rethinking the Iron Age (Merriman 1987). In an apparent triumph of Rousseau over Hobbes, we are simply replacing one congenial romanticised view of the Iron Age with another. Will future generations of scholars regard early

twenty-first-century accounts of the Earlier British Iron Age with the same amused incredulity that is currently directed by some at those who created the Celtic warrior paradigm?

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Notes

1. As John Barrett observed in discussion, other key themes such as power and gender also received relatively little consideration (although for many regions, this is partly a function of the available evidence).
2. In keeping with the chronological focus of the Durham seminar, this paper focuses primarily on the Earlier Iron Age. Originally, the corresponding, and in many ways richer, Later Iron Age material was to have been treated in the companion volume on that period (Haselgrove and Moore 2007), but the promised contribution never materialised.
3. In commenting on this paper, J.D. Hill made the point, which I accept, that a key reason for the lack of discussion of violence and warfare in 'different Iron Age' discourse has been the need to put 'clear blue water' between it and the former warrior-aristocrat-centred paradigm. There has been a justified fear of a slide back to '[Celtic] warrior' models, because '[we are] still lacking language that allows us to talk about social organisation in terms of leaders, fighters, etc. that doesn't run the risk of looping back into chieftains, aristocrats [and] warriors in a traditional manner' (J.D. Hill, pers. comm.). My own view, however, is that if this problem was widely perceived as serious, it would have been more publicly aired. The fact that this has not happened seems to me further evidence that scholars are indeed comfortable that the issues in question should tacitly slip from the agenda.
4. Pinker (2002) makes a detailed, evidence-based case for the existence of universal human traits and capabilities – 'human nature' –

underlying cultural variability. He also makes a swingeing (if in many regards overstated and unduly polemical) attack on the social sciences as a whole for their denial, whether overt or tacit, of human nature, and consequent exaggeration of the role of cultural, as opposed to genetic, factors in shaping what individuals and societies do. This places much of the foregoing into an informative wider context.

5. For more on this, and my own self-examination in this regard, see James (1993).

Bibliography

- Adam, A.-M. and Rouveret, A. (eds) 1986. *Guerre et Sociétés en Italie aux Ve et IVe siècles avant J.-C. Les Indices Fournis par l' Armement et les Techniques de Combat*. Paris: Ecole Normale Supérieure.
- Aijmer, G. and Abbink, J. (eds) 2000. *Meanings of Violence: a Cross-Cultural Perspective*. New York: Berg.
- Aldhouse-Green, M. 2001. *Dying for the Gods: Human Sacrifice in Iron Age and Roman Europe*. Stroud: Tempus.
- Armit, I. 2007. Social landscapes and identities in the Irish Iron Age, in Haselgrove and Moore 2007, 130–139.
- Bishop, M.C. and Coulston, J.C.N. 1993. *Roman Military Equipment*. London: Batsford.
- Bourdieu, P. 1977. *Outline of a Theory of Practice*. Cambridge: Cambridge University Press.
- Bourdieu, P. 2001. *Masculine Domination*. Cambridge: Polity.
- Bowman, G. 2001. The violence in identity, in Schmidt and Schröder 2001a, 25–46.
- Bradley, R. 1998. *The Passage of Arms: an Archaeological Analysis of Prehistoric Hoards and Votive Deposits*. Oxford: Oxbow Books.
- Carman, J. (ed.) 1997. *Material Harm: Archaeological Studies of War and Violence*. Glasgow: Cruithne Press.
- Carman, J. and Harding, A. (eds) 1999. *Ancient Warfare*. Stroud: Sutton.
- Clastres, P. 1994. *Archeology of Violence*. New York: Semiotext(e).
- Craig, C.R., Knüsel, C.J. and Carr, G. 2005. Fragmentation, mutilation and dismemberment: an interpretation of human remains on Iron Age sites, in Parker Pearson and Thorpe 2005, 165–180.
- Cunliffe, B. 1995. *Iron Age Britain*. London: English Heritage.
- Dent, J. 1983. Weapons, wounding and war in the Iron Age, *Archaeological Journal* 140, 120–128.
- Ferguson, R.B. 1984. Introduction: studying war, in R.B. Ferguson (ed.), *Warfare, Culture and Environment*. New York and London: Academic

Press.

- Feugère, M. (ed.) 1997. *L'équipement Militaire et l'Armement de la République (Ive-Ier s. avant J.-C.). (Proceedings of the Tenth International Roman Military Equipment Conference, Montpellier, 1996)*. Oxford: Journal of Roman Military Equipment Studies 8.
- Foster, J. 1996. Metalworking in the British Iron Age: the evidence from Weelsby Avenue, Grimsby, in B. Raftery (ed.), *Sites and Sights of the Iron Age*, 49–61. Oxford: Oxbow Books.
- Frazier, W. 1999. Common recollections: resisting enclosure 'by agreement' in seventeenth-century England, *International Journal of Historical Archaeology* 3, 75–99.
- Guilane, J. and Zammit, J. 2001. *Le Sentier de Guerre: Visages de la Violence Préhistorique*. Paris: Seuil.
- Haas, J. 1990. *The Anthropology of War*. Cambridge: Cambridge University Press.
- Hamilton, S. and Manley, J. 2001. Hillforts, monumentality and place: a chronological and topographic review of first millennium BC hillforts in south-east England, *Journal of European Archaeology* 4, 7–42.
- Hanson, V.D. 1999. Hoplite obliteration: the case of the town of Thespieae, in Carman and Harding 1999, 203–217.
- Harris, W.V. 1985. *War and Imperialism in Republican Rome, 327–70 BC*. Oxford: Clarendon Press.
- Haselgrove, C., Armit, I., Champion, T., Creighton, J., Gwilt, A., Hill, J.D., Hunter, F. and Woodward, A. 2001. *Understanding the British Iron Age: an Agenda for Action*. Salisbury: Trust for Wessex Archaeology.
- Haselgrove, C. and Moore, T. (eds) 2007. *The Later Iron Age in Britain and Beyond*. Oxford: Oxbow Books.
- Hill, J.D. 1995a. How should we study Iron Age societies and hillforts? A contextual study from southern England, in J.D. Hill and C.G. Cumberpatch (eds), *Different Iron Ages: Studies on the Iron Age in Temperate Europe*, 45–66. Oxford: British Archaeological Reports International Series 602.
- Hill, J.D. 1995b. The pre-Roman Iron Age in Britain and Ireland (ca. 800 BC to AD 100): an overview, *Journal of World Prehistory* 9, 47– 98.
- Hill, J.D. 1996. Weaving the strands of a new Iron Age, *British Archaeology* 17, 8–9.
- Hopkins, M.K. 1978. *Conquerors and Slaves*. Cambridge: Cambridge University Press.
- James, S.T. 1993. How was it for you? Personal psychology and the perception of the past, *Archaeological Review from Cambridge* 12, 87–100.

- James, S.T. 1997. Iron Age warfare, *British Archaeology* 22, 10.
- James, S.T. 1999. The community of the soldiers: a major identity and centre of power in the Roman empire, in P. Baker, S. Jundi, and R. Witcher (eds), *TRAC 98: Proceedings of the Eighth Annual Theoretical Roman Archaeology Conference, Leicester, 1998*, 14–25. Oxford: Oxbow Books.
- James, S.T. 2002. Writing the Legions: the development and future of Roman military studies in Britain, *Archaeological Journal* 159, 1–58.
- Keeley, L.H. 1996. *War before Civilization*. Oxford: Oxford University Press.
- Keepax, C. 1979. The human bones, in G.J. Wainwright, *Gussage All Saints: an Iron Age Settlement in Dorset*, 161–171. London: Department of the Environment Archaeological Report 10.
- Kelly, R. 2000. *Warless Societies and the Origin of War*. Ann Arbor: University of Michigan.
- Knight, R.W., Browne, C. and Grinsell, L.V. 1972. Prehistoric skeletons from Tormarton, *Transactions of the Bristol and Gloucester Archaeological Society* 91, 14–17.
- Lintott, A. 1999. *Violence in Republican Rome*. Oxford: Oxford University Press.
- Martin, D.L. and Frayer, D.W. 1997. *Troubled Times: Violence and Warfare in the Past*. Australia: Gordon and Breach.
- Merriman, N. 1987. Value and motivation in prehistory: The evidence for ‘Celtic’ spirit, in I. Hodder (ed.), *The Archaeology of Contextual Meanings*, 111–116. Cambridge: Cambridge University Press.
- Miller, D., Rowlands, M. and Tilley, C. (eds) 1989. *Domination and Resistance*. London: Routledge.
- Millett, M. 1990. *The Romanization of Britain: an Essay in Archaeological Interpretation*. Cambridge: Cambridge University Press.
- Oldenstein, J. and Gupte, O. (eds) 1999. *Spättrömische Militärausrüstung. (Proceedings of the Eleventh International Roman Military Equipment Conference, Mainz, 1998)*. Braemar: Journal of Roman Military Equipment Studies 10.
- O’Rourke, P.J. 1992. *Give War a Chance: Eyewitness Accounts of Mankind’s Struggle against Tyranny, Injustice and Alcohol-free Beer*. London: Picador.
- Osgood, R. 2000. Northern and Western Europe, in Osgood *et al.* 2000, 9–36.
- Osgood, R., Monks, S. and Toms, J. 2000. *Bronze Age Warfare*. Stroud: Sutton.
- Parker Pearson, M. and Thorpe, N. (eds) 2005. *Warfare, Violence and Slavery in Prehistory*. Oxford: British Archaeological Reports International Series 1374.

- Peteet, J. 1994. Male gender and rituals of resistance in the Palestinian Intifada: a cultural politics of violence, *American Ethnologist* 21, 31– 49.
- Pinker, S. 2002. *The Blank Slate: the Modern Denial of Human Nature*. London: Allan Lane.
- Pontrandolfo, A. and Rouveret, A. 1992. *Le tombe dipinte di Paestum*. Modena: F.C. Panini.
- Pontrandolfo, A., Rouveret, A. and Cipriani, M. 1998. *Le tombe dipinte di Paestum*. Paestum: Fondazione Paestum.
- Raftery, B. 1994. *Pagan Celtic Ireland: the Enigma of the Irish Iron Age*. London: Thames and Hudson.
- Reddé, M. and von Schnurbein, S. (eds) 2001. *Alésia: fouilles et recherches Franco-Allemands sur les travaux militaires Romains autour du Mont-Auxois (1991–1997)*. Paris: Mémoires de l'Académie des Inscriptions et Belles-Lettres 22.
- Reynolds, P. 1979. *Iron Age Farm: the Butser Experiment*. London: British Museum.
- Riches, D. (ed.) 1986. *The Anthropology of Violence*. Oxford: Blackwell.
- Rüpke, J. 1990. *Domi militiae: die religiöse Konstruktion des Krieges in Rom*. Stuttgart: F. Steiner.
- Schmidt, B.E. and Schröder, I.W. (eds) 2001a. *Anthropology of Violence and Conflict*. London: Routledge.
- Schmidt, B.E. and Schröder, I.W. 2001b. Introduction: violent imaginaries and violent practices, in Schmidt and Schröder 2001a, 1–24.
- Schneider-Herrmann, G. 1996. *The Samnites of the Fourth Century BC as Depicted on Campanian Vases and in Other Sources*. London: Bulletin of the Institute of Classical Studies Supplement 66.
- Schulten, A. 1914–31. *Numantia: die Ergebnisse der Ausgrabungen 1905– 19*. Munich: Bruckmann.
- Schulten, A. 1933. *Geschichte von Numantia*. Munich: Piloty and Loehle.
- Sharples, N. 1991. Warfare in the Iron Age of Wessex, *Scottish Archaeological Review* 8, 79–89.
- Stead, I.M. 1991a. Many more Iron Age shields from Britain, *Antiquaries Journal* 71, 1–35.
- Stead, I.M. 1991b. *Iron Age Cemeteries in East Yorkshire*. London: English Heritage Archaeological Report 22.
- Stead, I.M. 1995. The metalwork, in K. Parfitt (ed.), *Iron Age Burials from Mill Hill, Deal*. 58–111. London: British Museum.
- Stead, I.M. 1998. *The Salisbury Hoard*. Stroud: Tempus.
- Stead, S. 1991. The human bones, in I.M. Stead 1991b, 126–139.
- Terrenato, N. 1998. *Tam firmum municipium: the Romanization of Volaterrae and its cultural implications*, *Journal of Roman Studies* 88,

94–114.

- Terrenato, N. 2001. Introduction, in S.J. Keay and N. Terrenato (eds), *Italy and the West: Comparative Issues in Romanization*, 1–6. Oxford: Oxbow Books.
- Van Wees, H. (ed.) 2000. *War and Violence in Ancient Greece*. London: Duckworth.
- Woolf, G. 1993. Roman peace, in J. Rich and G. Shipley (eds), *War and Society in the Roman World*, 171–194. London: Routledge.

Building communities and creating identities in the first millennium BC

Niall Sharples

Introduction

This paper has two goals: to provide a long-term overview of change and to examine the relationship between material culture and monumentality in the later prehistory of the Wessex region of southern England. These areas of research are not as well represented in the literature as they should be, and their study is inhibited by the disciplinary structures of British archaeology. Very few scholars bridge the gap between Bronze Age and Iron Age studies and even fewer address the relationship between finds and field archaeology. These disciplinary divisions are much more insidious than in other periods and do not help our understanding of later prehistory. There are many issues that could be clarified by taking a long-term perspective that transcends the Bronze Age/Iron Age transition and it is unclear why this boundary should provide such a conceptual divide when there are evidently many similarities in the societies on either side of the division.

This paper is specifically concerned with the distinction between the contrasting archaeological visibility of Late Bronze Age artefacts and Iron Age monuments. In a paper published over ten years ago (Sharples 1991a), I linked these differences to an opposition between power held by the individual and power held by the community. At the time this was an interesting observation but it was not accompanied by a detailed interpretation. I felt that there was a connection between these two quite different aspects of the archaeological record, but it was unclear to me how this relationship could be articulated.¹ What could link the construction

of a massive monumental structure with the deposition of elaborate prestige metalwork? The purpose of this paper is to explore what this relationship might be and I wish to do this by emphasising the significance of gift exchange in Late Bronze Age and Iron Age societies.

Gift exchange

Since the original publication of Mauss' seminal work on *The Gift* in 1925 (Mauss 1954), a substantial body of anthropological literature has built up on this topic. Various alternative positions have been taken up, which could provide quite different perspectives on the archaeological record (e.g. Sahlins 1972; Appadurai 1986; Bazelmans 1991; Weiner 1992; Frow 1997; Godelier 1999). It is not possible to go into these differences in detail; instead I will outline some of the main points and give a basic explanation of how gift exchange differs from commodity exchange.

Gregory (1982) has argued that the primary distinction between gift and commodity exchange is that the former is about the relationships between people whereas the latter is about the relationships between things. Godelier (1999, 11–12) goes even further and suggests that the movement of objects is only a byproduct of gift giving, as the primary goal of the exchange is to establish friendship between the giver and the receiver of gifts. These relationships are the formative bonds that create group identities and mediate contact between groups. Gift exchange is closely connected to the creation of kin relations through marriage and the exchange of a wife/husband often forms the source for a long-term relationship of gift giving and receiving. Commodity exchange, in contrast, involves the exchange of things with no associated human attachments. These things have a comparable value and therefore the process of exchange involves the simultaneous cancelling of any debt. Commodity exchange has no long-term significance and does not create a relationship between the individuals involved in the exchange.

Most anthropologists would agree that there is a spectrum of exchange relationships in most contemporary societies, but that gift exchange tends to be a dominant feature of clan-based societies, whereas commodity exchange is a defining characteristic of class-

based societies. Commodity economies are characterised by an emphasis on production to capacity. They maximise profit by the reduction of labour cost and are fundamentally concerned with the conversion of resources held in common into goods owned by individuals (Frow 1997, 139).

Ownership is important, as it is fundamental to how we understand the historical development of exchange. The freedom to dispose of property by an individual is crucial to their ability to participate in a commodity exchange, but individual rights of ownership over anything, including labour, are a subject of considerable debate (Frow 1997). In contemporary society, such arguments concern our ability to sell human sperm or eggs, or to control the reproduction of our image or the words we write. Frow contends that the ability to define and appropriate property previously held in common is one of the principal features of capitalism. In societies dominated by gift giving, individuals cannot acquire ownership of land, resources or possessions. Ownership is partial and freedom to participate in exchange relationships is restricted by obligations to other members of kin, age, gender and status-related groups (Strathearn 1988). As a consequence of the inalienable nature of these collective claims of ownership, the gift cannot simply be cancelled by the return of the object at a later date. Gift exchange creates a relationship that ensures that future gifts will continue to pass between individuals or groups for some time to come.

Gregory (1982, 61–9) has also emphasised that a theory of gift exchange has to incorporate a theory of production and consumption. Human labour is a gift, which creates obligations. This gift can be clearly seen in the coming together of individuals in acts of communal construction. Participation in these acts creates an obligation not simply disposed of by feeding the participants, but which requires future participation in reciprocal acts. Similarly, the cultivation of food and the production of artefacts require labour in resource acquisition and craftsmanship. Raw materials and crop fertility can be conceived of as gifts given by deities. They bind the recipient into reciprocal acts of gift giving which can take the form of prosaic daily offerings or elaborate ceremonial festivals.

It goes without saying that the identification of gift exchange in

the archaeological record is problematic. The most obvious approach to establishing the importance of gift giving in any society is to understand the significance of individual ownership and the role of production. I do not intend to examine the first problem here, but – despite the recent suggestions of Hill (1995a) and Thomas (1997; 1998) – I would argue that there is no evidence for individual, or even household, ownership of land or resources in the first millennium BC. All the material present in the archaeological record for the first millennium BC could be the result of gift exchange. However, it seems likely that even within societies dominated by gift exchange, there are a large number of transactions which do not involve the creation of significant social debts.

Exchange in the Later Bronze Age

Ideas about gift exchange have been current in the archaeological literature for some time and many authors have considered them in some detail in relation to the Later Bronze Age (Rowlands 1980; Barrett 1985; Barrett and Needham 1988; Bradley 1990; Taylor 1993). There seems to be general agreement that gift exchange was the dominant practice and is accountable for much of the movement of metals. The absence of sources for copper, gold and tin in the lowland areas of southern and eastern Britain necessitates some exchange mechanism and it seems likely from analysis of the alloys (Northover 1982; Rohl and Needham 1998), typological characterisation of the artefacts (Burgess 1991), and the presence of shipwreck cargoes (Muckelroy 1981) that central southern England was largely supplied with metal from the adjacent areas of the Continent.

A principal area of contention is how important commodity exchange was in these Later Bronze Age societies and how commodity and gift exchange could be differentiated archaeologically. Bradley (1990) has argued that significant differences in the composition of hoards found on dry land and in wet places (Needham and Burgess 1980) indicate a distinction between utilitarian and votive deposition. The objects found in dry land, utilitarian hoards were interpreted as commodities exchanged through balanced transactions or barter (Bradley 1990, 145).

However, in the recent reprint of *Passage to Arms*, Bradley (1998, xviii–xix) suggests this was a ‘weakness’ and that the whole process of production, circulation, use and deposition should be regarded as shrouded in ritual.

Barrett and Needham (1988) take a similar view and accept that both dry and wet hoards represent ritual deposition of material acquired through gift exchange. However, they still wish to identify a role for commodity exchange in the Bronze Age, and suggest that this was the mechanism for the movement of material from the Continent to Britain. This is based on two lines of interpretation: an ethnographic generalisation and the nature of the Dover wreck cargo. They accept Sahlins’ (1972) position that commodity exchange largely occurs between groups on the edge of bounded territories, where the participants involved have no kin relationship. The latter suggestion is clearly contradicted by Gregory (1982, 50) who argued that subsistence products were regarded as commodities and exchanged by barter within the group. Early Greek literature also documents the importance of gift giving in creating diplomatic alliances between distant, and alien, societies and the emerging Greek polities (Herman 1987, 78). The Dover cargo was argued to indicate commodity exchange because the composition of the material is completely different from the material found in Britain and is difficult to parallel on the Continent (Muckelroy 1981). The material would appear to have been assembled from a wide range of geographical areas and would seem to be best explained as the result of the travels of an itinerant scrap merchant. This might well be the case, but the exceptional nature of this discovery makes it impossible to generalise, and Needham has re-evaluated his position (Needham and Dean 1987).

The most detailed explanation of the nature of exchange networks has been the investigation of the Middle to Late Bronze Age material from southern England by Rowlands (1976; 1980) and Ellison (1980a; 1980b; 1981). They provide a model based on detailed analysis of Middle Bronze Age metal and pottery, and argue that the variability of the hoard record is due to the creation of a tiered system of exchange networks. Each tier is represented by different material, operating independently of the other tiers and identifying a different category of human relationship. At the lowest

level, domestic ceramics define localities and were concerned with the redistribution of local surplus between related families. These localities were connected by the circulation of bronze axes to form regions, which represent groups related through marriage alliances. The distribution of high-status metalwork, such as swords, gold ornaments, and large spearheads had a political and ritual function and identified an elite who operated on a pan-European scale.²

Rowlands (1980) suggested that the growing importance of metal during the Late Bronze Age was a result of increasing competition within the elite, involving the manipulation of exchange relationships to achieve victory in conflicts, which ranged from relatively peaceful feasts to violent warfare. Access to large quantities of copper alloys and their deposition in increasingly elaborate rituals was crucial to the maintenance of local, regional, and pan-European relationships. This would imply that the collapse, in the eighth century BC (Needham this volume), of the long-distance exchange networks that supplied southern England with copper alloys undermined a complex network of social relationships that linked individuals, families and polities in southern England.³

Exchange in the Early Iron Age

‘Their [hillforts’] massive storage capacities imply the stockpiling of goods for redistribution, while the occurrence in some quantities of bulk raw materials... produced outside their immediate territories, indicates that it was probably to the forts that these materials were transported before being redistributed to the settlements in the hinterland’ (Cunliffe 1991, 533).

Much of the debate about exchange relationships in the Iron Age has focused on the accuracy of Cunliffe’s interpretation of hillforts (1984, 556–62; 1991; 1995). This model isolated the economy from social and religious activity and effectively argued that material culture circulated as commodities and that the production and distribution of these commodities was controlled by an elite living in the hillfort. This model has been subject to sustained criticism in recent years and it has been fairly emphatically demonstrated that the occupants of hillforts did not have a pre-eminent role in either the production or distribution of commodities (Bowden and

McOmish 1987; Stopford 1987; Ehrenreich 1991; Sharples 1991b; Morris 1994; 1996; Hill 1995a; 1996). Indeed the evidence for specialist production of any form is remarkably rare in the Early Iron Age. This can be demonstrated by outlining in some detail the evidence for the production and distribution of iron and pottery. Other materials, particularly salt containers and quernstones, are undoubtedly also relevant to this debate but, as space is limited, I shall concentrate on materials similar to those already addressed in the previous section.

The role of iron in the mid first millennium BC is significantly different from the earlier role of bronze. In Wessex, there is a widespread decline in the number of objects present in the archaeological record, hoarding disappears and weapons and other bodily ornaments are hardly ever found. It seems that defining the self and demonstrating status using material culture was no longer possible or desirable. This change in the significance of metal may be because the long-distance exchange of raw iron was not a feature of the Early Iron Age. In contrast to the sources of copper and tin, iron ores are widely available throughout the British Isles. Wessex in particular is surrounded by high quality ores in the Weald, the Forest of Dean, the Mendips, and, slightly further afield, in Devon and Northamptonshire, whilst low-grade ores are present across the whole of southern England (Salter and Ehrenreich 1984, 147–8; Ehrenreich 1985, 16–19). The Tertiary basins of Hampshire and the Thames valley contain iron pans, with similar deposits in the Greensand and the chalk producing iron sulphide ores in the form of marcasite nodules.⁴

The archaeological evidence for ironworking in the Early Iron Age is poor but it does suggest the routine exploitation of local sources prior to the third century BC.⁵ A number of sites such as Longbridge Deverill in Wiltshire (Tylecote 1986, 139) and La Sagesse, Romsey in Hampshire (Green 1994) suggest smelting in the seventh to fifth centuries BC. Recent, as yet unpublished, excavations at Rooksdown Hospital, Basingstoke, have produced large quantities of slag from fourth-century BC ditch fills (Andrews and Laidlaw 1996). At Maiden Castle, Dorset, excavation of occupation deposits dating to about 400 BC yielded large plano-convex hearth bottoms, which probably indicate primary smelting

(Salter 1991a, 167). This material was not found associated with a furnace but was incorporated into settlement contexts.

From the beginning of the first millennium BC, the ceramic record is essentially split by a distinction between fineware bowls and coarseware jars, although fine jars, coarse bowls, and cups are also present (Barrett 1980). This distinction continues into the Iron Age when the cups disappear and the qualitative difference between coarseware jars and fineware bowls becomes increasingly marked. The bowls are often elaborately decorated, very carefully manufactured and often well finished to produce a highly polished red surface, which imitates rare forms of copper alloy vessels (Cunliffe 1991, 65). Slight variations in the form of these fineware bowls distinguish separate regions in southern Britain; Cunliffe suggests that the regional Early Iron Age assemblages which he identifies in south Dorset, Somerset, Wiltshire/Hampshire, and Sussex represent specialist production zones (*ibid.*, fig 4.4; 461). In her survey of pottery from Britain, Morris (1994) argued that there was a 'limited presence of specialised fineware production of bowls' in central Wessex and that the industry was 'based predominantly on localised production for local consumption' (*ibid.*, 377).

Locating these production centres and estimating the importance of specialist production at any one site has, however, proved problematic. The ability to identify sources is hampered by the geology of the region. Most of the Wessex uplands are chalk, and flint provides an acceptable temper that was used throughout the region. Flint cannot be sourced, and it is therefore often impossible to ascertain whether pottery is produced locally, or at a specialist production centre some distance away. Only when the ceramics are tempered with material from the geologies surrounding the chalk is it possible to identify imported ceramics. At Potterne, Wiltshire, the early deposits (c. eleventh to tenth centuries BC) suggested non-local material was very rare, but, as the deposits accumulated, non-local material increased, until in the final deposits (c. seventh to sixth centuries BC) it formed almost 20% of the assemblage (Morris 2000, 166). Of particular significance is the observation that there was little morphological difference between those vessels derived from exchange relationships with communities some distance away and those made in the vicinity of the site (*ibid.*, 172). Similar

patterns were observed for the Early Iron Age at Danebury, Hampshire (Morris 1997), where a large proportion of the vessels examined were made from non-local fabrics and again there was little morphological difference between these pots and those made close to the hillfort. Morris has suggested that the former were exchanged to create relationships between different communities; they were not concerned with acquiring pots with superior qualities. It may be that the exchange of pots was closely connected with visits by members of other communities and that a visit was the occasion for a feast which involved the destruction of a selection of vessels (Hill 1995b). This interpretation clearly suggests that we are dealing with gift, rather than commodity, exchange.

Exchange in the Middle to Late Iron Age

The characteristics of these Late Bronze Age/Early Iron Age assemblages began to change during the fourth century BC. The contrast between jars and bowls becomes less distinctive, the quality of the pottery declines significantly and decoration becomes less and less common. These features make it difficult to identify regional characteristics and it seems likely that they indicate the declining importance of signalling status and gender distinctions in a settlement context. However, by the beginning of the third century BC this transitional period comes to an end and a distinctive series of new ceramic forms are established. The quality of the pots improves and although decoration becomes increasingly important, the size diversity of the assemblages remains very standardised (Woodward 1997, 29). Cunliffe (1991) identifies regional traditions in the South-West (Glastonbury wares), Dorset (Maiden Castle/Marnhull style) and in a large area extending from the Welsh borders to the Sussex coast (the Saucepan Pot continuum). The decoration of 'saucepan pots' is further classified into several style zones that generally subdivide the area into smaller regions. Sourcing remains problematic due to the dominance of simple flint-tempered fabrics, but Morris has argued that production is 'multi-tiered and appears to be uncentralised' (1994, 379). In Hampshire, sites such as Lains Farm (Bellamy 1992) were dominated by non-local production, whereas others, such as Danebury, were dominated by flint-tempered wares which are impossible to source

(Morris 1997). In Dorset, production was increasingly dominated by sand-tempered wares produced by specialists working in the area around Poole Harbour (Brown 1997).

Coinciding with the changes in ceramics was an increase in the quantity and variety of other forms of material culture. In particular, there is a significant increase in the quantity and variety of iron objects in circulation. The most detailed assessment of the amount of material discarded per year on any site was carried out at Danebury (Osgood 1995, 204–6). The analysis indicated that in the first two to three hundred years of occupation at the hillfort, there was a fairly low rate of deposition, but that in the third century BC the quantities of iron deposited dramatically increased. Ceramic phase (cp) 7 contains over 16 times more iron items than cp 3. A comparable pattern was visible at Maiden Castle, where there was a dramatic rise in the number of iron objects between phase 6F and 6G, in the second century BC (Laws 1991, 162). Similar increases can be observed at Winnall Down, Hampshire (Winham 1985, table 4) and at Gussage All Saints, Dorset (Wainwright 1979, 104–9). These patterns are obviously not a direct reflection of the amount of material in use during the Iron Age but the change at the end of the Middle Iron Age is sufficiently large to suggest a significant increase in the availability of iron.

The nature of the objects present in the Middle to Late Iron Age is also highly relevant, as it provides clear evidence for the importance of exchange in the last three hundred years BC. At Danebury, Crew (1995) has demonstrated that trade iron made up nearly 40% by weight of the iron present on the hillfort. This material includes currency bars and hooked billets, which are widely dispersed across Wessex in the final three centuries BC; they are identified for the first time in cp 7. Currency bars are one of the most thoroughly studied artefacts of the Iron Age. The form of the object served at least three functions: it indicated the quality of the iron, it facilitated the production of the simple tools, and it made a symbolic reference to warfare, agriculture and feasting (Hingley 1990; 2004; Crew 1994). Over 90% of the known currency bars have been recovered from hoards, the deposition of which seems to be closely associated with boundaries. The existence of currency bar and other large, iron hoards (e.g. Alcock 1972, 153–4, pl. 59–60;

Cunliffe and Poole 1991, 354) is an important feature of the later Middle Iron Age, as hoards were not deposited during the Early Iron Age. It would seem likely that their reappearance reflects the increasing importance of long-distance exchange.

The nature of iron production also changes in the Later Iron Age. Evidence for smelting disappears,⁶ but evidence for smithing becomes relatively commonplace. The metalworking evidence from most Wessex settlements consists of small quantities of smithing debris scattered amongst the settlement contexts. The only concentration of material from Danebury came from a pit dating to cp 7, which contained evidence for nine separate episodes of blacksmithing activity, spanning periods ranging from two hours to a day (Salter 1991b, 414). Salter argued that the evidence suggested 'that blacksmithing was a small-scale occasional activity' (*ibid.*, 415). The only exception in Wessex is from Maiden Castle, where smithing evidence includes an important concentration of material in the eastern gateway of the hillfort (Sharples 1991b). The activity area, dated to the beginning of the first century AD, was located above the infilled Early Iron Age ditch that lay between the two gates of the east entrance. Three separate layers were identified, implying that the use of the area as a smithy was intermittent. Salter (1991a, 170) estimates that over 200 kg of finished artefacts were produced, making this the largest smithing site known from Wessex.

Ehrenreich (1991) has argued that the iron industry of the Middle and Late Iron Age should be viewed as two separate spheres of activity. The primary production of the metal is undertaken by specialists in areas such as the Weald and the Forest of Dean. This material is then distributed to areas such as Wessex where it is transformed by craft workers who show very little specialist knowledge. The Maiden Castle evidence does slightly undermine this position, but it probably reflects increased specialisation only at the end of the Iron Age. The peripheral position of the smithy at the entrance to the hillfort might indicate that this was a potentially polluting activity which had to be separated from the domestic space (Hingley 1997). The fact that the smithing was apparently only a periodic activity may also imply that it was undertaken by peripatetic smiths.

Exchange in the first millennium BC

This review of the evidence for exchange relationships in the first millennium BC clearly emphasises the methodological differences in Bronze Age and Iron Age studies. In the former, a detailed theoretical understanding of the exchange process has been placed at the centre of the interpretation of Later Bronze Age society and this emphasises the role of gift exchange. In contrast, Iron Age studies have taken a minimalist approach to understanding the process of exchange. A commodity-based approach has dominated until very recently and although the model has been discredited, it has yet to be replaced by a comprehensive appreciation of the significant role of gift exchange. Analysis of exchange is largely relegated to specialist studies and little attempt has been made to move from the identification of imported material to a theoretical understanding of the nature of exchange relationships. In part this is due to the character of the archaeological record. The important role of copper alloys in the Bronze Age makes it impossible to avoid discussion of exchange. In contrast, the evidence for iron is much more ambiguous. Local and non-local sources are important but it is impossible fully to quantify the significance of either. We have to challenge these historiographical problems if we are to define the evolving character of exchange during the first millennium BC.

The evidence presented above indicates a massive change in the production and role of metals in society during the first millennium BC. In the Later Bronze Age, metals were one of the prime means of symbolising community and personal identity; their acquisition and transformation were tightly controlled, and their exchange lubricated the relationships within and between the different regions of Britain and Europe. With the advent of the Iron Age, metals lost their central significance; the rarity of iron objects in the Early Iron Age and the absence of objects exhibiting high quality craftsmanship and aesthetic qualities suggests that such items played little part in defining political relationships. Most objects were simple tools produced as and when required from raw materials present in the immediate locality.⁷

It could therefore be claimed that the beginning of the Iron Age represented a collapse in the practice of gift exchange and that this might have led to the introduction of commodity exchange (Thomas

1998). I would argue, however, that the collapse is restricted to the elite sphere of organised long-distance exchange networks. If Rowlands' (1980) view that the exchange spheres were separated is accepted, this collapse need not have had any effect on other spheres of exchange. Indeed the ceramic evidence – although obscured by the geology – suggests that local and regional exchange networks continued to function without major disruption throughout the Late Bronze Age/Early Iron Age transition. It is also unlikely that the collapse of these elite exchange networks resulted in the disappearance of elite competition. It is more likely that the energy expended on this was channelled into other spheres of competitive action.

Consumption

The other major change is in the nature of deposition. In the Late Bronze Age, exchange relationships were marked by deposition of the artefacts involved. Deposition is not necessarily a feature of gift exchange and has to be understood as part of a discussion of consumption rituals. I would argue that the deposition of a hoard was a ritual act of destruction directly related to the competitive nature of exchange.

Anthropological understanding of elaborate consumption rituals is dominated by discussion of 'potlatch', a term derived from the Kwakiutl tribe of the north-west coast of America (Boas 1966). For the Kwakiutl, a potlatch was a large festival organised by one individual, where vast quantities of objects ranging from trade blankets to elaborate 'coppers' were gathered together and then redistributed amongst the participants. Potlatch events were often related to life-cycle rituals, such as weddings and funerals, but could also be a result of breaking a taboo or were designed specifically to embarrass a rival. A distinctive feature of these festivals was the destruction of items, especially the extremely important 'coppers' (Rohner and Rohner 1970, 103–5). This occurred when there was a particularly bitter competition for status and position between two equivalent individuals.

Destruction was an important feature of this competition because it was a public demonstration of an individual's ability to perform a symbolic role. Any competitor who aspired to a particular status

within the community would be required to destroy a substantial quantity of material; the amount destroyed would have to be at least as much or more than that destroyed by a rival vying for the same position. However, by the act of destruction, the competitor has reduced the amount of material in circulation within the community, thus making it more difficult for a rival to accumulate this material. To carry out a potlatch, the protagonist would accumulate gift debts over a lengthy period of time. When sufficient debts had accumulated to achieve a show of strength that could not be emulated, they would call in the debts and assemble the material required for the potlatch. It is, however, likely that rivals would also have had debt relationships with the same people and so the timing was crucial. If they waited too long, the material owed might be used to pay a rival's debt, but if they acted too early, it might not be feasible to amass sufficient material to make it impossible for a rival to surpass the achievement. It is this complexity that makes the game competitive and worth playing.

Labour as potlatch

In my introduction to gift exchange I emphasised that the medium of exchange could not be restricted to material culture. Instead, it was a much wider phenomenon that encompassed the exchange of human labour and agricultural produce. It is important therefore to consider the construction of monumental earthworks in the first millennium BC. One of the most distinctive features of this period is the increasingly important role that boundaries play in defining settlements. The beginning of the Iron Age was characterised by the sudden ubiquity of bounded settlements. An important feature of the creation of these settlement boundaries was that they involved the labour of many individuals, some of whom cannot have been part of the community enclosed by the boundary. Even the construction of a relatively small boundary, such as the timber palisade around Little Woodbury (Bersu 1940), indicates the consumption of a resource – timber – that was probably owned by a wider community than those living inside the enclosure. This indicates the ability of the household, or households, that lived within the boundary to call in debts of labour and resources that had been built up over the years.

Many of the boundaries created in this period are substantial and, for the larger hillforts, the boundary is probably created by using labour from both inside and outside the enclosed community. This involves the bringing together of resources from a very wide area. Hillforts, such as Cadbury Castle (Alcock 1980), have distinctive timber-framed ramparts that would involve the use of large quantities of good quality structural timber. A variant of this rampart form includes stone cladding and, at Maiden Castle, elaboration of the eastern entrance involved the use of both timber and large quantities of limestone (Wheeler 1943, pl. XC–XCI). The limestone could not have been quarried on site and the nearest source was some distance away on the other side of the South Dorset Ridgeway. These resources were not necessarily required because they were crucial to the structural integrity of the ramparts: it seems more likely that they were a means of embedding the landscape and its inhabitants into the monument. Anyone walking into Maiden Castle through its eastern entrance would have been visibly reminded of the relationship between the people in the fort and the people on the other side of the Ridgeway. The environmental evidence suggests that the Wessex landscape was largely devoid of trees at this time (Evans 1984, 480–1), so it is likely that the timber used in rampart construction might also be immediately recognised as coming from a particular location.

The developments of the next three hundred years suggest that the mobilisation of resources for boundary construction was the principal medium for social and political competition. Enclosures are the dominant form of settlement type in Wessex in the Early to Middle Iron Age. However, the range in form of these enclosures is dramatic. Boundaries can be relatively simple palisades (Little Woodbury), indicating little more than a couple of weeks work, or enormous multiple ramparts and ditches (Maiden Castle), under construction for generations (Sharples 1991b). Most enclosures are small but there are a significant group of large enclosures, normally called hillforts. As the area enclosed increases, the likelihood of the surrounding boundary being multiple and substantial increases. The density of occupation is also variable and although it seems unconnected to the area enclosed, it does seem to correspond to the complexity of the boundary. In general, sites with substantial

boundaries, such as Maiden Castle, Hambledon Hill (Oswald 1996), and Danebury (Cunliffe 1984; 1995; Cunliffe and Poole 1991), were likely to be densely occupied.

In Early Iron Age Wessex, it would appear that almost everyone was living inside an enclosure, but, as noted above, the size of the enclosure boundary and the density of occupation were very variable. In the Middle Iron Age the number of enclosures appears to have declined. Some hillforts are abandoned whereas others became larger, multivallate and more densely occupied.⁸ Similar trends are visible in the smaller enclosures: sites like Little Woodbury developed larger, more significant boundaries with elaborate entrances (Bersu 1940), whereas others, such as Winnall Down (Fasham 1985), were abandoned or had their boundaries infilled. Both large and small enclosures often have complex histories with periods of enhancement, growth and abandonment not occurring in any straightforward sequence.

The significance of these enclosures can best be explained by the analogy of the potlatch and is directly comparable to the role of metal in the Late Bronze Age. If we regard the construction process as related to the gift of labour and resources, then construction of ever larger and more complicated enclosure boundaries is effectively the conspicuous consumption of resources. Communities were in competition to attract larger and larger numbers of people to help in the process of construction. These acts of construction were possibly seasonal events or festivals, and the successful organisation of the event would define the relationship between the communities involved. The construction of the boundary represented the consumption of the labour resource in an act that was largely symbolic. The ramparts existed as a visible indication of the relationship created between the community living in the hillfort and the other communities that participated in the construction event.

The large numbers of people who attended these construction events would require large quantities of food, animals and grain. The importance of food is demonstrated by the provision of substantial storage facilities. These are one of the dominant features of the Wessex hillforts and appear to provide resources for communities much bigger than those occupying the enclosure (cf.

Hill 1995a). It is also interesting that 'four-post granaries' were often arranged around the edge of hillforts. They appear to be deliberately positioned to enhance the visibility of the stored foodstuffs. These structures might in some cases have been the only feature inside the ramparts visible to someone on the outside. Food was clearly of great symbolic importance to these communities and this is also demonstrated by the important animal bone deposits often found in abandoned grain storage pits at these settlements (Hill 1995b). However, as with other artefact sacrifices, they would provide a medium for competition. The offerings appear to be made in the context of a public event where food was both distributed to the households in attendance, and given to the gods. The ability to sacrifice many animals would be a public demonstration of the wealth and connections of a host community.⁹

Food was acquired not only through intensified production but also by the creation of exchange relationships with neighbouring communities. The careful manipulation of these relationships would be required to accrue sufficient surplus to stage a construction event. It is this process of manipulation which results in the rise to prominence, and I would argue dominance, of one hillfort over another. Clearly to compete, a community would have to be located in an advantageous location, as this allowed them to create sufficient surplus to enter the competition. However, this only provides a baseline and does not explain why certain hillforts, such as Maiden Castle, appear to develop much more substantial boundaries and enclose much larger communities. This can only be explained by the innate abilities of the individuals that belonged to that community. These abilities will rise and fall as generations pass and may explain why the development of some hillforts appears to be quite erratic.

Conclusion

In this paper I have attempted to demonstrate a link between the construction of monumental enclosures and the collapse of the exchange networks that characterise the Later Bronze Age. The most convincing explanation for this pattern is that the creation of these enclosures was based on a system of exchange relationships that was similar, in their political purpose, to the gift exchange networks

of the previous period. The connection between swords and hillforts rests not on their role in warfare but in their ability to document the relationships that were so important to the social reproduction of these societies.

In both the Bronze Age and the Iron Age, the exchange of artefacts, food, labour, and other resources was ranked, structuring local relationships between kin groups as well as political competition between distant polities. In the first quarter of the first millennium BC, a variety of bronze objects was used to lubricate these different levels of exchange, but as we progress through the millennium, metals lose their central position in these networks and pottery becomes important in local exchange. In Wessex, however, a new arena for competition was developing around the construction and maintenance of settlement boundaries. The creation of these boundaries depended upon the exchange of labour, food and resources such as timber and stone, and the largest boundaries probably represent the integration of widespread and disparate communities. Boundary maintenance absorbs most of the spare capacity of these societies in the third quarter of the millennium and it is only after 300 BC that metals, and other artefacts, begin to re-establish their significance.

This pattern cannot be applied to other areas of Britain, where there were quite contrasting responses to the collapse of the bronze exchange networks. In some areas, such as the Atlantic fringe of Scotland, competition focused around the construction of large roundhouses and these became increasingly complex monuments with time (Parker Pearson and Sharples 1999). These complex roundhouses, known as brochs, can, like hillforts, be interpreted as a method for redistributing resources in order to differentiate between different groups within the community and to compete with other communities. However, in these societies the focus is on competition between households (Sharples 2003). In eastern England the significance of elaborate metalwork appears to survive the end of the Bronze Age and provides a mechanism through which elites coordinate and compete. In Yorkshire, the primacy of the individual is indicated by placing many of the dead in single graves surrounded by a ditch (presumably covered by a barrow) and accompanied by grave goods which can include some very

elaborate pieces of metalwork (e.g. Stead 1991). Continuity with the Late Bronze Age is also indicated by the recovery of several important Hallstatt D daggers from the river Thames, and many of the rivers and wet places in eastern England have produced metalwork of Iron Age date (e.g. Fitzpatrick 1984), in contrast to those of Wessex and the Welsh Marches.

Patterns similar to those observed in Wessex are visible in other areas of Europe. Diepeveen-Jansen (2001) has recognised a correlation between hillforts and elite burials in the Hunsrück-Eifel region. 'The significance of hillforts in social practice decreases at the beginning of La Tène A. This goes hand in hand with the growing importance of funerary practices as the context of the material manifestation of individual and group identities' (*ibid.*, 66). The chronology of this pattern is slightly different from the one discussed above but the social significance of the changes is clearly similar. Another area which might provide a comparable alternation of material culture complexity and monument construction occurs with the development of *oppida* in central Europe (Bohemia). The period prior to the appearance of *oppida* is characterised by rich graves containing an equally rich material culture (Wells 1995, 93). Finds characteristically include bracelets, anklets, fibulae, buckles, finger rings, swords, spears, and shields, many of which are elaborately decorated with La Tène art motifs. All of these objects were worn by the deceased and were used to indicate the status, gender, and age of these individuals (Waldhauser 1987). Rich graves decline dramatically when the *oppida* are constructed and the quality and character of the material culture found on these sites also changes. Complex metalwork associated with decorating the body becomes quite rare and the elaborate art styles become much more representational. Cumberpatch (1995, 84) has argued that the appearance of *oppida*, in Bohemia, indicates that 'an ideology centred on the individual was replaced by one in which there was an overriding concern with the anonymous and the communal, reflected in the mobilisation of labour and the construction of ramparts and elaborate gateways'.

The relationship between artefact- and monument-based competition strategies cannot be arbitrarily applied as a universal rule. It may have a wide applicability, but there are well-known

exceptions, perhaps the most obvious being the spectacular Hallstatt D societies of south Germany (e.g. Collis 1984). In this area, people were clearly constructing large monuments such as the Heuneburg at the same time as they were producing a range of high-status artefacts, many of which end up in burials under large barrows, as at Hochdorf. Similarly, in the final phase of the Iron Age a range of very rich burials such as Clemency, appear in northern Gaul, contemporary with the use of *oppida* like the Titelberg (Metzler 1995). Nevertheless, these do seem to be exceptional situations in later prehistory and it is much more normal for a society to adopt a strategy of elite competition through either artefact use or monumental construction.

Notes

1. This observation has been enhanced by work in Atlantic Scotland (Sharples 2003), where I observed a similar distinction between brochs (large monumental houses) and the material richness of the succeeding, early Historic, period.
2. This model has been criticised by Barrett and Needham (1988, 136), who argue that ‘metal circulated as tools, ornaments and dress decoration in a quite secondary role to social statuses established by other means’. They justify this argument on the basis that there is no archaeological evidence for the accumulation of surplus at sites such as Blackpatch and Itford Hill, nor is there much evidence for an important role for metalwork on these settlements. They see no evidence for larger political structures in this region; the primary political concerns are gender and kin relations, which are resolved through boundary construction. However, this critique is flawed by the limited scale of the analysis. Rowlands (1976) would argue that surplus production is exported from the region to be consumed in core areas such as the Thames valley or the south coast; there is therefore no need for excessive storage capacity in the Downs. The absence of bronze artefacts from the locality of the settlements is not surprising if this is a relatively impoverished periphery. The suggestion that boundaries are the most important archaeological expression of political developments in this period is interesting, especially as the most thoroughly explored enclosed settlement of this period is South Lodge in Dorset, where the importance of the boundary is enhanced by the presence of several copper alloy artefacts in the deliberately infilled ditch (Barrett *et al.* 1991). This would certainly not undermine the pre-eminent role for

metalwork envisaged by Rowlands (1976; 1980).

3. Thomas (1989) has pointed out that Wessex has an unusual number of Llyn Fawr hoards (see also O'Connor this volume), whereas it is relatively poor in the preceding periods of the Late Bronze Age. The importance of Wessex in the transition period is highlighted by Taylor (1993, 54–6), but his analysis of the hoard material does not suggest that the region is not involved in metalwork accumulation and deposition during the preceding Ewart Park phase – although the inhabitants certainly do not have access to as much metalwork as they had in the Taunton phase of the Middle Bronze Age and it is a relatively poor area compared to regions such as East Anglia.

4. Analysis of iron tools has identified trace elements suggesting the use of a high cobalt and nickel source in the Early Iron Age. Ehrenreich (1985, 95) argued that this indicates that the iron came from Cornwall, as this is the only source for this distinctive impurity pattern. However, the number of objects identified with this elemental signature is low and it seems better to wait for further analysis to confirm this interpretation.

5. Hingley (1997, 10; 16) suggests that metalworking was specialised and possibly even centralised in the Early Iron Age, but this argument is based on the absence of evidence, which can never be a particularly convincing argument.

6. The exception is Gussage All Saints, which produced over 750 kg of smelting slag (Wainwright 1979). This was recovered from a secondary quarry hollow on the south side of the enclosure entrance, close to a pit containing large quantities of copper alloy casting debris. Unfortunately our understanding of the ironworking activity is restricted to the comment that an iron smelting furnace was present. In the excavation report, the activity was dated to the late first century AD, but Clough (1985, 184) suggested that the activity should be associated with the pre-Roman occupation and this re-dating has been widely accepted by many scholars. It is not however clear why Clough believed the ironwork was Iron Age and the matter clearly warrants further investigation. The quarry hollow in question was only half-excavated.

7. I see no reason for the social exclusion of ironworkers in the Early Iron Age. The significance of iron was transformed in the later part of the Iron Age, when the exchange of high quality iron became important. The development of these exchange networks seems to result from an increasing demand for a range of tools that required iron with particular qualities and craftspeople with considerable skills. In this period there is increasing evidence that metalworkers were

separated from the community by taboos and ritual, and that the objects exchanged were of considerable symbolic significance (e.g. Hingley 1997; 2004).

8. These patterns were first demonstrated at Maiden Castle (Sharples 1991a, 259–60) and have recently been confirmed by the Danebury Environs Project (Cunliffe 2000, 182).

9. See Hill's description of the infilling of pit 6595 at Winnall Down for a particularly clear analysis of the resources and logistics involved in burying these remains (Hill 1995b, 70–1).

Bibliography

- Alcock, L. 1972. *'By South Cadbury, is that Camelot...'* Excavations at Cadbury Castle 1966–70. London: Thames and Hudson.
- Alcock, L. 1980. The Cadbury Castle sequence in the first millennium BC, *Bulletin of the Board of Celtic Studies* 28, 656–718.
- Andrews, P. and Laidlaw, M. 1996. Metallurgical debris, in C. Butterworth and A. Hutcheson (eds), *Land adjoining the Site of the Former Rooksdown Hospital, Basingstoke, Hampshire: Excavations undertaken in 1989 and 1995*. Salisbury: Wessex Archaeology draft text.
- Appadurai, A. 1986. *The Social Life of Things: Commodities in Cultural Perspective*. Cambridge: Cambridge University Press.
- Barrett, J. 1980. The pottery of the Later Bronze Age in lowland England, *Proceedings of the Prehistoric Society* 46, 297–319.
- Barrett, J. 1985. Hoards and related metalwork, in D.V. Clarke, T. Cowie and A. Foxon (eds), *Symbols of Power at the Age of Stonehenge*, 95–106. Edinburgh: HMSO.
- Barrett, J. and Bradley, R. (eds) 1980. *The British Later Bronze Age*. Oxford: British Archaeological Reports British Series 83.
- Barrett, J. and Needham, S. 1988. Production, circulation and exchange: problems in the interpretation of Bronze Age bronzework, in J. Barrett and I.A. Kinnes (eds), *The Archaeology of Context in the Neolithic and Bronze Age: Recent Trends*. Sheffield: Department of Archaeology and Prehistory.
- Barrett, J., Bradley, R. and Green, M. 1991. *Landscape, Monuments and Society: the Prehistory of Cranborne Chase*. Cambridge: Cambridge University Press.
- Bazelmans, J. 1991. *By Weapons made Worthy. Lords, Retainers and their Relationship in Beowulf*. Amsterdam: Amsterdam Archaeological Studies 5.
- Bellamy, P. 1992. The investigation of the prehistoric landscape along the route of the A303 road improvement between Andover, Hampshire and

- Amesbury, Wiltshire 1984–1987, *Proceedings of the Hampshire Field Club and Archaeological Society* 47, 5–81.
- Bersu, G. 1940. Excavations at Little Woodbury, Wiltshire, Part 1. The settlement revealed by excavation, *Proceedings of the Prehistoric Society* 29, 206–213.
- Boas, F. 1966. *Kwakiutl Ethnography*. Chicago: University of Chicago Press.
- Bowden, M. and McOmish, D. 1987. The required barrier, *Scottish Archaeological Review* 4, 76–84.
- Bradley, R. 1990. *The Passage of Arms: an Archaeological Analysis of Prehistoric Hoards and Votive Deposits*. Cambridge: Cambridge University Press.
- Bradley, R. 1998. Rereading *The Passage to Arms*, in R. Bradley, *The Passage of Arms: an Archaeological Analysis of Prehistoric Hoards and Votive Deposits*, xv–xxxii. Oxford: Oxbow Books.
- Brown, L. 1997. Marketing and commerce in Late Iron Age Dorset: the Wareham/Poole Harbour pottery industry, in Gwilt and Haselgrove 1997, 40–45.
- Burgess, C. 1991. The East and the West: Mediterranean influence in the Atlantic World in the Later Bronze Age, c. 1500–700 BC, in C. Chevillot and A. Coffyn (eds), *L'âge du Bronze Atlantique: ses faciès, de l'Ecosse à l'Andalousie et leurs relations avec le bronze continental et la Méditerranée*, 25–45. Beynac-et-Cazenac: Association des Musées du Sarladais.
- Champion, T.C. and Collis, J.R. 1996. *The Iron Age in Britain and Ireland: Recent Trends*. Sheffield: J.R. Collis Publications.
- Clough, R.E. 1985. The iron industry in the Iron Age and Romano-British periods, in P.T. Craddock and M.J. Hughes (eds), *Furnace and Smelting in Antiquity*, 179–188. London: British Museum Occasional Paper 20.
- Collis, J.R. 1984. *The European Iron Age*. London: Batsford.
- Crew, P. 1994. Currency bars in Britain: typology and function, in M. Mangin (ed.), *La sidérurgie ancienne de l'est de la France dans son contexte européen*, 345–350. Paris: Annales littéraires de l'Université de Besançon 536.
- Crew, P. 1995. Aspects of the iron supply, in Cunliffe 1995, 276–284.
- Cumberpatch, C.G. 1995. Production and society in the Later Iron Age of Bohemia and Moravia, in Hill and Cumberpatch 1995, 49–67.
- Cunliffe, B. 1984. *Danebury: an Iron Age Hillfort in Hampshire*. London: Council for British Archaeology Research Report 52.
- Cunliffe, B. 1991. *Iron Age Communities in Britain* (3rd edn). London: Routledge.
- Cunliffe, B. 1995. *Danebury: an Iron Age Hillfort in Hampshire, Vol. 6. A Hillfort Community in Perspective*. York: Council for British Archaeology

Research Report 102.

- Cunliffe, B. 2000. *The Danebury Environs Programme. The Prehistory of a Wessex Landscape, Vol. 1. Introduction*. Oxford: Oxford University Committee for Archaeology Monograph 49.
- Cunliffe, B. and Miles, D. (eds) 1984. *Aspects of the Iron Age in Central Southern Britain*. Oxford: Oxford University Committee for Archaeology Monograph 2.
- Cunliffe, B. and Poole, C. 1991. *Danebury: an Iron Age Hillfort in Hampshire, Vols 4 and 5*. London: Council for British Archaeology Research Report 73.
- Diepeveen-Jansen, M. 2001. *People, Ideas and Goods*. Amsterdam: Amsterdam Archaeological Studies 7.
- Ehrenreich, R. 1985. *Trade, Technology and the Ironworking Community of Southern Britain in the Iron Age*. Oxford: British Archaeological Reports British Series 144.
- Ehrenreich, R. 1991. Metalworking in Iron Age Britain: hierarchy or heterarchy?, in R. Ehrenreich (ed.), *Metals in Society: Theory beyond Analysis*. Philadelphia: MASCA Research Papers in Science and Archaeology 8.2, 69–80.
- Ellison, A. 1980a. Settlements and regional exchange: a case study, in Barrett and Bradley 1980, 127–140.
- Ellison, A. 1980b. Deverel-Rimbury urn cemeteries: the evidence for social organisation, in Barrett and Bradley 1980, 115–126.
- Ellison, A. 1981. Towards a socio economic model for the Middle Bronze Age in southern England, in I. Hodder, G. Isaacs and G. Hammond (eds), *Pattern of the Past: Studies in Honour of David Clarke*, 413–438. Cambridge: Cambridge University Press.
- Evans, J. 1984. Land snail analysis, in Cunliffe 1984, 476–481.
- Fasham, P.J. 1985. *The Prehistoric Settlement at Winnall Down, Winchester*. Gloucester: Hampshire Field Club Monograph 6.
- Fitzpatrick, A.P. 1984. The deposition of La Tène Iron Age metalwork in watery contexts in southern England, in B. Cunliffe and D. Miles (eds), *Aspects of the Iron Age in Central Southern England*. Oxford: Oxford University Committee for Archaeology Monograph 13.
- Frow, J. 1997. *Time and Commodity Culture: Essays in Cultural Theory and Postmodernity*. Oxford: Clarendon Press.
- Godelier, M. 1999. *The Enigma of the Gift*. Cambridge: Polity Press.
- Green, F.J. 1994. Early Iron Age stream deposits at La Sagesse, Romsey, Hampshire, in A.P. Fitzpatrick and E.L. Morris (eds), *The Iron Age in Wessex: Recent Work*, 49–52. Salisbury: Trust for Wessex Archaeology.
- Gregory, C.A. 1982. *Gifts and Commodities*. London: Academic Press.

- Gwilt, A. and Haselgrove, C. 1997. *Reconstructing Iron Age Societies*. Oxford: Oxbow Monograph 71.
- Herman, G. 1987. *Ritualised Friendship and the Greek City State*. Cambridge: Cambridge University Press.
- Hill, J.D. 1995a. How should we understand Iron Age societies and hillforts? A contextual study from southern Britain, in Hill and Cumberpatch 1995, 45–66.
- Hill, J.D. 1995b. *Ritual and Rubbish in the Iron Age of Wessex*. Oxford: British Archaeological Reports British Series 242.
- Hill, J.D. 1996. Hill-forts and the Iron Age of Wessex, in Champion and Collis 1996, 67–86.
- Hill, J.D. and Cumberpatch, C. (eds) 1995. *Different Iron Ages: Studies on the Iron Age in Temperate Europe*. Oxford: British Archaeological Reports International Series 602.
- Hingley, R. 1990. Iron Age ‘currency bars’: the archaeological and social context, *Archaeological Journal* 147, 91–117.
- Hingley, R. 1997. Iron, ironworking and regeneration: a study of the symbolic meaning of metalworking in Iron Age Britain, in Gwilt and Haselgrove 1997, 9–15.
- Hingley, R. 2004. Iron Age ‘currency bars’ in Britain: items of exchange in liminal contexts?, in C. Haselgrove and D. Wigg-Wolf (eds.), *Iron Age Coinage and Ritual Practices*, 183–205. Mainz: Studien zu Fundmünzen der Antike 20.
- Laws, K. 1991. Iron objects, in Sharples 1991b, 162–165.
- Mauss, M. 1954. *The Gift: Forms and Functions of Exchange in Archaic Societies*. London: Cohen and West.
- Metzler, J. 1995. *Das treverischer Oppidum auf dem Titelberg*. Luxembourg: Dossiers d’Archéologie du Musée National d’Histoire et d’Art 3.
- Morris, E.L. 1994. Production and distribution of pottery and salt in Iron Age Britain: a review, *Proceedings of the Prehistoric Society* 60, 371–393.
- Morris, E.L. 1996. Artefact production and exchange in the British Iron Age, in Champion and Collis 1996, 41–66.
- Morris, E.L. 1997. Where is the Danebury ware?, in Gwilt and Haselgrove 1997, 36–39.
- Morris, E.L. 2000. Summary, in A.J. Lawson, *Potterne 1982–1985. Animal Husbandry in later Prehistoric Wiltshire*, 166–177. Salisbury: Wessex Archaeology Report 17.
- Muckelroy, K. 1981. Middle Bronze Age trade between Britain and Europe: a maritime perspective, *Proceedings of the Prehistoric Society* 47, 275–298.
- Needham, S.P. and Burgess, C. 1980. The later Bronze Age in the Lower

- Thames Valley: the metalwork evidence, in Barrett and Bradley 1980, 437–470.
- Needham, S.P. and Dean, M. 1987. La cargaison de Langdon Bay à Douvres (Grande Bretagne): la signification pour les échanges à travers la Manche, in J.-C. Blanchet (ed.), *Les relations entre le continent et les Iles Britanniques à l'âge du bronze (Actes du Colloque de Bronze de Lille, 1984)*. Amiens: Supplément à Revue Archéologique de Picardie, 119–124.
- Northover, P. 1982. The exploration and long distance movement of bronze in Bronze Age and Early Iron Age Europe, *Bulletin of the Institute of Archaeology* 19, 45–72.
- Osgood, R. 1995. Intensification, in Cunliffe 1995, 204–206.
- Oswald, A. 1996. *Hambledon Hill, Child Okeford, Hanford and Iwerne Courtney or Shroton, Dorset*. Cambridge: RCHME.
- Parker Pearson, M. and Sharples, N. 1999. *Between Land and Sea: Excavations at Dun Vullan, South Uist*. Sheffield: Sheffield Academic Press.
- Rohl, B. and Needham, S.P. 1998. *The Circulation of Metal in the British Bronze Age*. London: British Museum Occasional Paper 69.
- Rohner, R.P. and Rohner, E.C. 1970. *The Kwakiutl Indians of British Columbia*. New York: Holt, Rinehart and Winston.
- Rowlands, M. 1976. *The Production and Distribution of Metalwork in the Middle Bronze Age in Southern Britain*. Oxford: British Archaeological Reports British Series 31.
- Rowlands, M.J. 1980. Kinship, alliance and exchange in the European Bronze Age, in Barrett and Bradley 1980, 15–56.
- Sahlins, M. 1972. *Stone Age Economics*. Chicago: Aldine.
- Salter, C.J. 1991a. The ferrous metalworking evidence, in Sharples 1991b, 165–170.
- Salter, C.J. 1991b. Metallurgical analysis of the metalworking debris, in Cunliffe and Poole 1991, 412–415.
- Salter, C.J. and Ehrenreich, R. 1984. Iron Age metallurgy in central southern England, in Cunliffe and Miles 1984, 146–161.
- Sharples, N. 1991a. Warfare in the Iron Age of Wessex, *Scottish Archaeological Review* 9, 79–89.
- Sharples, N. 1991b. *Maiden Castle: Excavations and Field Survey 1985–86*. London: English Heritage Archaeological Report 19.
- Sharples, N. 2003. From brochs to brooches: changing social relationships in the first millennium AD, in J. Downes and A. Ritchie (eds), *Sea Change: Orkney and Northern Europe in the Later Iron Age, AD 300–800*, 151–165. Balgavies: Pinkfoot Press.
- Stead, I.M. 1991. *Iron Age Cemeteries in East Yorkshire*. London: English Heritage Archaeological Report 12.

- Stopford, J. 1987. Danebury: an alternative view, *Scottish Archaeological Review* 4, 70–75.
- Strathearn, M. 1988. *The Gender of the Gift: Problems with Women and Problems with Society in Melanesia*. Berkeley: University of California.
- Taylor, R. 1993. *Hoard of the Bronze Age in Southern Britain: Analysis and Interpretation*. Oxford: British Archaeological Reports British Series 228.
- Thomas, R. 1989. The bronze-iron transition in southern England, in M.-L. Sørensen and R. Thomas (eds), *The Bronze Age–Iron Age Transition in Europe*, 287–303. Oxford: British Archaeological Reports International Series 483.
- Thomas, R. 1997. Land, kinship relations and the rise of enclosed settlement in first millennium BC Britain, *Oxford Journal of Archaeology* 16, 211–218.
- Thomas, R. 1998. When land first became private property, *British Archaeology* 34, 8–9.
- Tylecote, R.F. 1986. *The Prehistory of Metallurgy in the British Isles*. London: Institute of Metals.
- Wainwright, G.J. 1979. *Gussage All Saints: an Iron Age Settlement in Dorset*. London: Department of the Environment.
- Waldhauser, J. 1987. Keltische Gräberfelder in Böhmen, *Bericht der Römisch-Germanischen Kommission* 68, 27–178.
- Weiner, A.B. 1992. *Inalienable Possessions: The Paradox of Keeping-while-giving*. Berkeley: University of California Press.
- Wells, P.S. 1995. Settlement and social systems at the end of the Iron Age, in B. Arnold and D.B. Gibson (eds), *Celtic Chieftdom, Celtic State*, 88–96. Cambridge: Cambridge University Press.
- Wheeler, R.E.M. 1943. *Maiden Castle*. London: Research Report of the Society of Antiquaries of London 17.
- Winham, R.P. 1985. Finds of metal, in Fasham 1985, 46–56.
- Woodward, A. 1997. Size and style: an alternative study of some Iron Age pottery in southern England, in Gwilt and Haselgrove 1997, 26–35.

Deposits and doorways: patterns within the Iron Age settlement at Crick Covert Farm, Northamptonshire

Ann Woodward and Gwilym Hughes

Introduction

An entrance is used to provide a point of access and penetration between two areas or zones of culturally defined space. A house doorway gives added definition to such a point of access, allowing as it does entry into a different kind of perceived world. This is the world of 'indoors' defined in three dimensions by a roof as well as by confining walls; a private world within which light, and sight lines are largely obscured. In the Iron Age, house doorways were defined by lintels, jambs and thresholds, and they may have been closed by wooden doors, wattle baffles or hangings of leather or textile. Few traces of these organic features have ever survived, although the impressive nature of jambs and lintels can be appreciated in areas such as Cornwall, where many doorways survive in the stone-built courtyard houses. Most studies of Iron Age doorways have concentrated on their orientations (e.g. Oswald 1997). Orientation is important because it defined the axis of the structure of the house. Around this axis it is possible to consider the disposition and potential use of interior architectural space. This aspect was first discussed in detail by Parker Pearson (1996) in his paper *Food, fertility and front doors in the first millennium BC*.

Various distinctions in the use of domestic space, expressed in terms of structural oppositions, have been identified by ethnographers. For example, specific settlement patterns have been defined amongst the various Sotho-Tswana and Nguni speaking populations of southern Africa (Kuper 1980; 1982). Encoded within

this pattern are concepts of how social space was organised. This is reflected in the way that both settlements and individual houses are designed, often through the involvement of binary oppositions. Within individual houses, a right-male/left-female distinction is frequently maintained, often orientated at right angles to a front-secular/back-sacred or front-public/back-private division. A third dimension, centre-high status/periphery-low status has also been identified (*ibid.*).

Little attention has been paid to defining the differential use of front and back, or central and peripheral, spaces within Iron Age houses in Britain. In her study of later prehistoric houses in central and north Britain, Pope has however been able to show that a dichotomy between the use of front and rear space was strongly represented, and that a contrast between the usage of central and peripheral space was often detectable (Pope 2003; this volume). There was no evidence for left- and right-hand division of space until the later Iron Age, and even then, this was not commonly encountered.

In southern Britain, however, the existence of left-hand and right-hand patterning has been noted in a number of Iron Age houses. At Longbridge Deverill Cow Down, Wiltshire, Hawkes (1994) drew attention to the remarkable concentration of domestic debris in the right-hand sector (looking out) of the Early Iron Age house, and Allen described the concentrations of pottery in the right-hand gully terminals of middle Iron Age structures at Mingies Ditch, Oxfordshire (Allen and Robinson 1993, 90 and fig. 43). A similar patterning was discerned for the single Early Iron Age house excavated at Dunston Park, Berkshire (Fitzpatrick 1994, fig. 20.2). Fitzpatrick postulated that this distribution reflected activities and acts of deposition which were governed primarily by the availability of light entering a doorway oriented south-east towards the sunrise (*ibid.*, 69 and fig. 20.3).

A comparable pattern of pottery concentrations in right-hand terminals has been noted for some Iron Age enclosure ditches, e.g. the occurrence of fine wares in the ditch terminals of the Middle to Late Iron Age Enclosures A and B at Wakerley, Northamptonshire (Gwilt 1997, 159). At some other enclosures, however, finds were concentrated particularly in the left-hand, not the right-hand,

terminals. Clear examples of this include the distribution of ceramic materials within the Late Bronze Age circular enclosure ditch at Mucking North Ring, Essex (Parker Pearson 1996, fig. 9.1) and the occurrence of small finds and human remains within the Middle Iron Age enclosure ditch at Gussage All Saints, Dorset (Hill 1995, figs. 8.7 and 9.18).

Interestingly, the prevailing pattern of right-hand finds concentrations is matched within some Late Iron Age religious sites of the period, notably at Hayling Island, Hampshire, where the entrance through the enclosure ditch provides a very striking example, but also at Harlow, Essex, and Wanborough, Surrey (Haselgrove 2005, figs. 2, 5, 7). The same pattern is detectable in the distribution of finds in the construction trenches of Romano-Celtic shrines such as Brigstock, Northamptonshire, and the stone-built temple at Maiden Castle, Dorset (Smith 2001, figs. 4.4b, 5.1 and 5.23a respectively).

As an example of this type of spatial analysis, it was decided to consider first the detailed disposition of finds categories amongst the structures excavated at one of the most famous of all Iron Age settlements – the Glastonbury Lake Village. Located in the Somerset Levels, this waterlogged site yielded one of the best assemblages of structures and finds ever encountered in Britain.

Like much of the previous work on the other sites mentioned so far in this introduction, this reconsideration of Glastonbury will concentrate on the definition of patterning and potential activity areas within the interior of structures. Houses and other buildings have usually been considered in isolation, with little attention paid to activities that might have taken place outside and between them. The reason for this is that surface deposits and occupation layers have seldom survived. However, where timber structures were surrounded by eavesdrip gullies, as was the case in much of middle England, such features may contain debris from activities that took place in the immediate environs of the building, outside the walls and doorways. Such debris may include artefacts that entered the gully fillings by chance as well as others that were placed there deliberately. The debris may well reflect the positioning of exterior activity features such as fires, middens and ash heaps, whilst the overall nature of the debris may provide an indication of the

function of the timber structure itself.

Interpretation of the contents of eavesdrip gullies in this manner was pioneered by Pryor in his publication of the Iron Age settlement excavated at Cat's Water, Peterborough (Pryor 1984). A similar approach has been adopted and developed in the analysis of a large body of data relating to an extensive Iron Age settlement recently excavated in the East Midlands. Analysis of the evidence from Crick Covert Farm, Northamptonshire, forms the main subject of this paper. At Crick Covert Farm it was possible to excavate a large number of Iron Age structures with known entrance positions, and to record the distributions of various categories of finds and environmental materials in detail for 41 of them. It has thus proved possible to analyse the potential patterning of finds in relation to doorways using a far larger dataset than is normally available. Following the analysis of Crick, the evidence from Cat's Water will be re-assessed and some general conclusions will be attempted.

Structure and function at Glastonbury

It has long been recognised that the settlement of Glastonbury in the Somerset Levels, excavated by Bulleid and Gray (1911; 1917) early in the twentieth century, provided one of the largest and best recorded assemblages of Iron Age artefacts in Britain. The published data have been interpreted and discussed in various ways (e.g. Tratman 1970; Barrett 1987) and formed the basis for David Clarke's (1972) ambitious and hugely influential model for Iron Age settlement units. In 1995 all these approaches were superseded by a very detailed and rigorous reworking of the data (Coles and Minnitt 1995), leading to a new phasing for the site, a full reassessment of the artefacts themselves and discussion of their distribution amongst the structures. Coles and Minnitt defined four main phases of settlement. Their coloured phase plans (*ibid.*, figs. 4.9– 4.12) show the varying distributions through time of houses, shelters, clay spreads and other minor structures, and also indicate the positions of door thresholds where these were known.

The phase plans were supplemented by distribution plots showing hearths and all recorded finds (*ibid.*, fig. 8.6), and a series of plots for different artefact types grouped by function. Patterns of finds concentration in each phase were discussed in the text (*ibid.*, 196–

202), but the plots conflated finds from all four periods. Associated discussions highlighted structures which were characterised by significant groups of small finds through several of the phases (*ibid.*, 150–5, 194). The findspots of pottery were not recorded in detail by the excavators, but the gross amounts from the various ‘mounds’ are summarised in Coles and Minnitt (*ibid.*), fig. 2.6. The other categories of finds were grouped as follows:

- *Textile manufacture*: loom weights, combs (*ibid.*, fig. 6.5); whorls, bobbins, needles and bone points (*ibid.*, fig. 6.6).
- *Ornaments*: brooches, rings, bracelets (*ibid.*, fig. 6.7); beads, shale, dice etc (*ibid.*, fig. 6.8).
- *Weapons and harness*: sling shot, dagger, shield binding, cheek piece, terret, link and bit (*ibid.*, fig. 6.10).
- *Querns*: rotary and saddle (*ibid.*, fig. 8.2).
- *Human remains*: neonatal, skull, adult burial, roundel (*ibid.*, fig. 8.10).

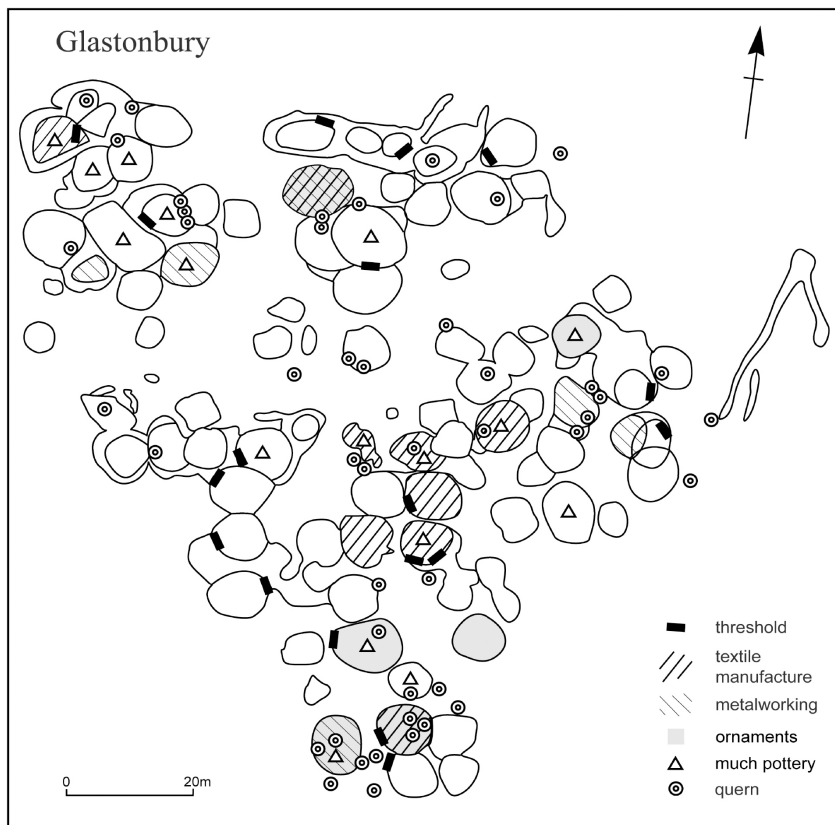


Fig. 1. Glastonbury: the distribution of thresholds and selected categories of finds (drawing: A. Woodward and N. Dodds).

A selection of this data is shown in [Figure 1](#). Structures that can be interpreted as houses are highlighted and their entrance positions are marked where known. The structures with large assemblages of finds associated with textile manufacture, metalworking or groups of ornaments are shaded, and the findspots of querns and the largest pottery assemblages are also indicated. It can be seen that there was strong evidence for textile production in nine structures, with a concentration of six structures in the centre of the settlement area. Structures containing metal ornaments were located mainly in the southern sector, where there was also a concentration of cheek pieces. Querns were widely distributed, as were the more substantial groups of pottery, which derived from seven houses and ten clay spreads.

The entire modular interpretation devised by David Clarke (1972) depended on a belief that there had been no significant movement of finds after deposition. Modern experience of excavating similar sites on the Somerset Levels indicates that some movement does take place, but mostly vertically (Coles and Minnitt 1995, 189). This observation suggests that a detailed appraisal of the *horizontal* patterning of finds, based on the conflated phase assemblages mapped by Coles and Minnitt, can be justified. This will therefore be attempted, firstly by considering the overall distribution of recorded finds from all site phases, as plotted by Coles and Minnitt (1995, fig. 8.6). There are 13 houses for which an entrance position is known, and most of these had centrally placed hearths. For these structures, the finds distributions were studied in relation to back/front and right/left oppositions. The results are presented in [Table 1](#). It appears that strong patterns of distribution involved the use of backspace, the zone around the central hearth, and the right-hand side of the house (looking out) rather than the left side.

Turning to the distributions of individual categories of finds, some very strong detailed patterns emerged. These were achieved by comparing the individual functional finds plots provided by Coles and Minnitt (see above) against the plan of houses and their entrance positions. One pattern perceived was that querns were not usually found in houses, but when they were, there was a tendency for them to occur towards the back of the enclosed space (see [Fig. 1](#)). Other categories that were found mainly in the backspace of houses were weaving combs, beads and human remains. On the other hand, clay weights and whorls, bobbins and needles tended to occur in the front area of houses, nearer the entrance. The distribution of ornaments and weapons within houses showed yet another pattern – all occurred in central positions, near to the hearth, with some weapons and harness fittings also occurring near the entrance. We have already noted a strong general preference for the positioning of finds in a right-hand location, as one looks out from the hut interior. The detailed analysis showed that this tendency was particularly evident in the case of weaving combs and human remains.

It is probable that the patterns perceived at Glastonbury result from a wide range of different depositional processes. Some of the

objects may have been lost during use, and therefore reflect the spatial locations of specific activities; on the other hand, other items may have been deposited deliberately, either when the house was built (foundation deposits); during the life of the house; or at the time of abandonment as closing deposits. Some of the metalwork, the querns in the ‘backspace’, and the human remains may well stem from deliberate deposits of these kinds. It is apparent that such deposits were placed in very particular preferred locations and these may have reflected patterns of use and occupation within the houses, or more general symbolic criteria.

<i>Zone</i>	<i>No. of houses</i>	<i>Zone (looking out from interior)</i>	<i>No. of houses</i>
Front	Nil	Right-hand	7
Around hearth or back	7	Left-hand	1
Even	6	Even	5

Table 1. Glastonbury: the location of finds concentrations within houses.

Such interpretations need to be considered further, but for the moment the main aim has been to demonstrate that strong patterning of finds distributions does exist. Although the distributions studied at Glastonbury relate to four conflated chronological phases, some distinct patterns have emerged and it may be that these relate to underlying social and ideological principles that prevailed through several centuries.

The excavations at Crick Covert Farm

The Iron Age site at Crick Covert Farm, in north-western Northamptonshire close to the border with Warwickshire (Fig. 2), was excavated by Birmingham University Field Archaeology Unit (now Birmingham Archaeology) in 1997–98, in advance of development of the eastern part of the Daventry International Rail Freight Terminal (DIRFT East). The settlement extends beyond the Covert Farm site to the north-west and to the south. The main focus of the Iron Age settlement covers 16 hectares, of which 13 lie within the Covert Farm site.

The archaeological brief for the project identified a series of

research objectives relating to the chronological and morphological development of the settlement, along with its social and economic organisation. In addition, a set of sensory themes was developed at the beginning of the project, with the aim of considering the site from the viewpoint of the human body: both the individual perceptions of the modern excavators and the inferred viewpoints of the Iron Age inhabitants. The idea was to interpret the site and all of its contents in terms of the five human senses.

The site occupies the lower eastern slopes and bottom of a broad and shallow stream valley that forms a tributary of the upper reaches of the River Avon. The underlying solid geology was Lias clay. Across the valley floor this clay was sealed by an extensive deposit of gravel, itself overlain by deposits of alluvium. This alluvium also filled the course of the stream forming a palaeochannel that originally ran from south-east to north-west across the south-western edge of the site during the Iron Age (Fig. 3). This pattern of natural deposition led to the identification of two distinct zones: an upper 'ploughed zone' in the northern area of the site where the exposed Lias clays had been truncated by medieval and later ploughing; and a lower 'alluvial' gravel zone in the southern area of the site to either side of the palaeochannel.

Following the machine excavation of the ploughsoil and upper alluvial deposits, numerous ring gullies, linear ditches and other archaeological features were recorded cutting both the clay in the 'ploughed zone' and the valley bottom gravels in the 'alluvial zone'. The sample excavation of features initially focused on intersections in order to unravel the complex stratification of the site. Where possible, the excavation of ring gullies was also focused at terminals, sections diametrically opposite the entrance causeway and at mid-points along each side. Several ring gullies were fully excavated to act as a control on the patterns of artefact distribution.¹

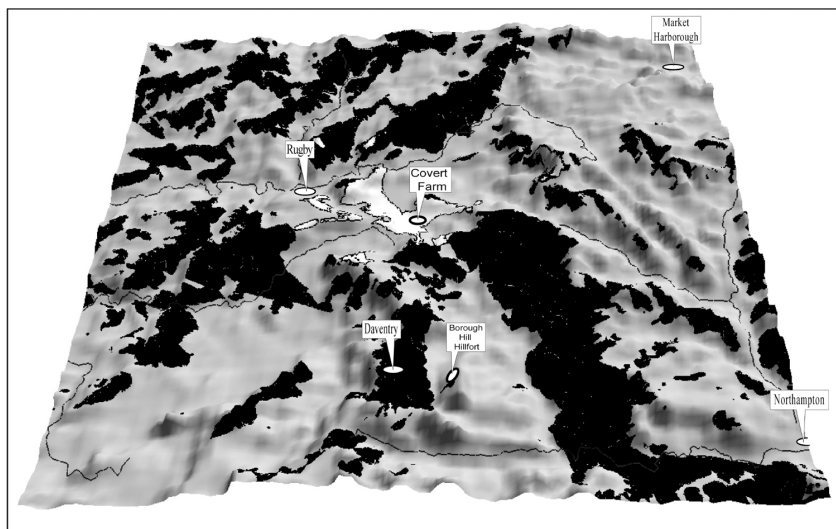


Fig. 2. The location of Crick Covert Farm. The area visible from the site is shown in white; that from the nearest hillfort (Borough Hill, Daventry) in black (drawing: L. Dingwall and N. Dodds).

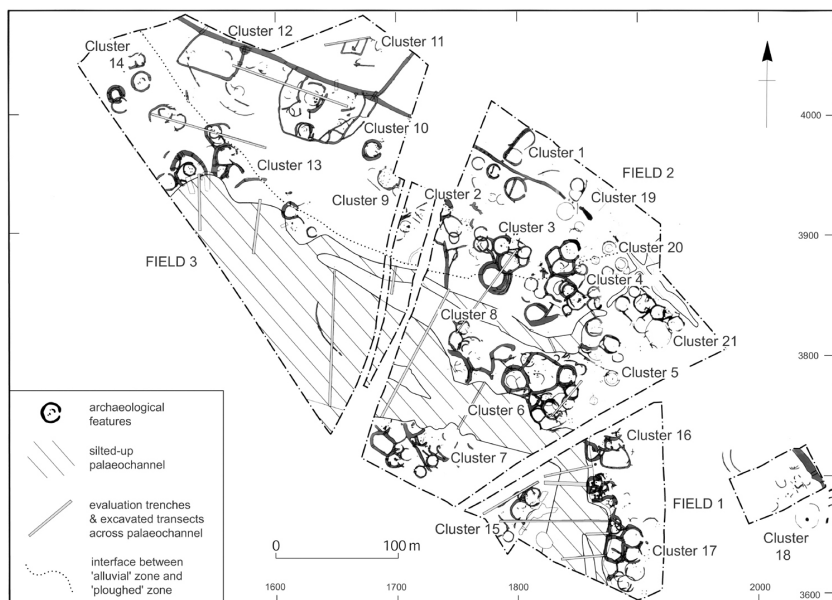


Fig. 3. Crick Covert Farm: plan of excavated areas (drawing: N. Dodds).

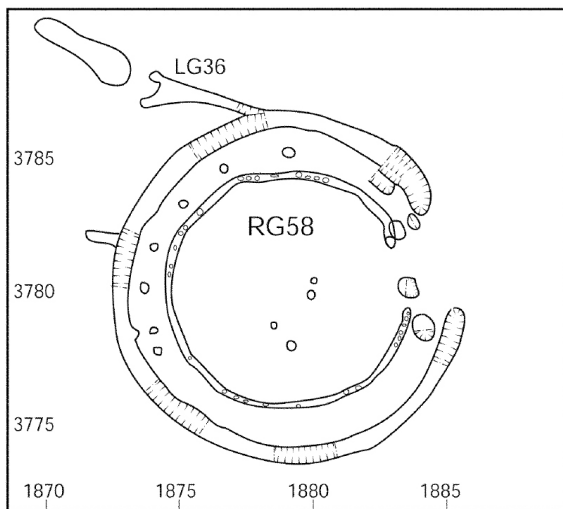
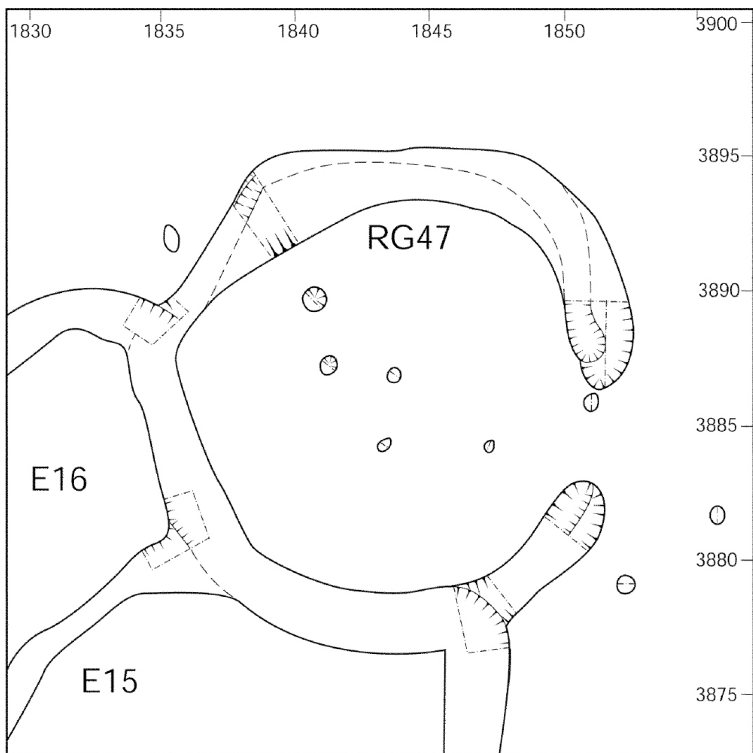


Fig. 4. Crick Covert Farm: plans of selected ring gullies (drawing: N. Dodds).

For ease of reference during excavation, the archaeological

features were grouped into 21 'clusters' (see [Fig. 3](#)). These included nearly 5000 distinct stratigraphic units (features and contexts). The formulation of a site phasing was based primarily on the complex stratigraphic relationships between these features and deposits. These were reviewed during the initial phases of the post-excavation programme and Harris matrices were created, allowing the relative phasing of individual groups of stratigraphic units. The incorporation of isolated features into each area sequence and the tying in of individual area strands to an integrated site phasing was largely based on diagnostic pottery sherds (identified by the site specialists in conjunction with Dennis Jackson), and the morphological similarities and the geographical associations between the various structural elements. Inevitably, many isolated features that contained no finds, were simply designated as unphased. All told, six stratigraphic phases were defined, as follows:

- Period 1 – Neolithic and Early Bronze Age
- Period 2 – Late Bronze Age and Early Iron Age
- Period 3 – Earlier Middle Iron Age
- Period 4 – Later Middle Iron Age
- Period 5 – Late Iron Age
- Period 6 – Romano-British

A total of 31 luminescence dates were obtained for pottery from Iron Age features scattered across the site. Six dates were obtained from unphased contexts and five were probably rogue dates. Of the remainder, a single date of 765 BC \pm 95 (Dur98Tlqi229–42) was obtained from a Period 2 (Early Iron Age) context; eleven dates ranging between 910 BC \pm 185 (Dur99Tlqi229–52) and 240 BC \pm 115 (Dur99Tlqi229–59) from Periods 3 and 4 (Middle Iron Age) contexts; and eight dates between 350 BC \pm 125 (Dur99Tlqi229–62A) to AD 140 \pm 115 (Dur99Tlqi229–45) from Period 5 (Late Iron Age) contexts.

Over 100 distinct ring gullies were recorded and sample excavated at Crick Covert Farm. The vast majority were penannular with entrances facing east or south-east. Before summarising the evidence from each chronological phase, it is worth reviewing the evidence for these ring gullies in more detail.

The ring gullies at Crick Covert farm

The silty fills and the U-shaped profiles of the ring gullies at Crick Covert Farm suggested that they did not contain structural elements. The need for drainage features would have been increased by the generally impermeable clay soils. Furthermore, many of the ring gullies were frequently re-cut, suggesting regular maintenance.

There does appear to be a correlation between ring gullies of this type and impermeable clay soils. Similar examples have been excavated in Northamptonshire at Weekley (Jackson and Dix 1987), Moulton Park (Williams and Mynard 1974), Blackthorn (Williams and McCarthy 1974), Twywell (Jackson 1975) and Draughton (Grimes 1960). At several other sites, with more permeable soils, it seems likely that the excavated ring gullies were construction trenches for walls rather than drainage gullies, for example at Wakerley in the Welland valley (Jackson and Ambrose 1978) and Aldwincle in the Nene valley (Jackson 1977).

Ring gullies cut into clay would rapidly have filled with water in wet weather, unless they were linked to overflow drains that carried water away from the structures. Such drains were unusual at Crick Covert Farm, implying that the ring gullies served as more than simple drainage features. Perhaps they also represented symbolic boundaries, defining the private domestic space of the occupants of the buildings. The fact that they rapidly filled with water could have provided an architectural emphasis between private and public space (see also Moore this volume), as well as providing possible wet contexts for the deliberate deposition of artefacts.

A few of the ring gullies, especially from Period 2, were associated with internal concentric ring slots (e.g. [Fig. 4](#) lower). However, very little evidence for internal structures survived within the circuit of the majority of ring gullies (e.g. [Fig. 4](#) upper). Although the possibility of temporary, perhaps even portable buildings must be considered, the absence of post holes or foundation gullies need not necessarily imply the absence of substantial, permanent buildings. The outward pressures caused by the conical roof of a large roundhouse could have been dealt with by a tension ring of interlocking timbers at the top of the walls (P. Bennett pers. comm.). Any dug posts would have rapidly rotted anyway. The longest standing reconstructed Iron Age roundhouse in

Britain is at Castell Henllys in Pembrokeshire, which is now over 20 years old (Bennett 2001). This has virtually no timber surviving below ground. Therefore, it seems perfectly possible that the ring gullies at Crick Covert Farm did surround substantial long-lived buildings for which very little evidence survives.

Summary of site phasing

Period 1 (Neolithic and Early Bronze Age) – Only a single feature dating to the Neolithic or Early Bronze Age was identified: a small pit containing sherds of Beaker pottery on the northern edge of the palaeochannel, at the western end of the site in Cluster 13. Although there was a scatter of flint flakes and fragments across the whole site, diagnostic Neolithic tool types, including a single polished flint axe, were concentrated in the vicinity of the Beaker pit.

Period 2 (Late Bronze Age and Early Iron Age) – The first clear evidence for domestic settlement was located on the lower-lying gravels and included two groups of ring gullies to the north of the palaeochannel (Fig. 5). It is possible that a boundary ditch, up to 2.5 m wide and 0.8 m deep, that surrounded the northern side of the settlement, was established in Period 2. Possible breaks in the line of this ditch may have provided access into the settlement area. The southern group of ring gullies was located in Clusters 5 and 6 and consisted of an arc of four ring gullies and a four-post structure. The northern group, in Cluster 20, was located close to the settlement boundary, adjacent to one of the possible entrances, and also consisted of at least four ring gullies and a four-post structure.

The remaining Period 2 activity was represented by a scatter of features and structures in other areas, including at least five further ring gullies and residual Period 2 pottery in later features. In general, the ring gullies were relatively small structures with narrow and shallow ditches. It is suggested that they surrounded buildings between 4 m and 9 m in diameter, with an average size of 6.7 m. Several gullies were associated with internal, concentric ring-slots that may have carried the wall footings of these buildings.

Evidence for food production derives principally from charred plant remains and the animal bone assemblage. The plant remains

indicate the use of cereals on site, including spelt wheat, and probably represent a scatter of redeposited domestic waste. The very small number of 'countable' animal bone fragments were largely cattle, but also included sheep, dog, and pig. Evidence for metalworking in Period 2 included a bronzeworking crucible and the debris from iron smithing.

Period 3 (earlier Middle Iron Age) – The distinct grouping of the ring gullies, which was apparent in Period 2, was less clear in Period 3, although the total number of complete ring gullies that were identified increased to 20 (Fig. 5). However, some groupings could be defined, including at least five ring gullies in Cluster 6 and four ring gullies in Cluster 4/20. Several 'pairs' of ring gullies were also recognised, comprising adjacent structures identified as living and ancillary huts (e.g. RG72 and RG83 in Cluster 3; RG1 and RG2 in Cluster 17). Elsewhere, the Period 3 ring gullies were fairly well dispersed around the settlement. There appeared to be a slight increase in the size of the ring gullies, suggesting rather larger buildings ranging between 4 m and 15 m in diameter, with an average size of 9.1 m.

The charred plant remains from Period 3 (and also Periods 4 and 5) indicate small-scale cleaning of cereals for use (largely spelt wheat, but also emmer and barley), with chaff and weed seeds being removed before consumption. However, the evidence also suggested that the settlement was producing grain and was possibly self-sufficient in cereals, storing them to provide food for the winter. The presence of domestic animal bone (especially cattle, although in smaller proportions than in later periods) indicates a mixed economy. There was continuing evidence, including hearth bottoms, for small-scale iron smithing (but not necessarily smelting). Some evidence for trade links was provided by the presence of granitic pottery from Leicestershire, and a sherd of Cheshire briquetage.

Period 4 (later Middle Iron Age) – The settlement appeared to have undergone a major expansion in this period with a considerable increase in the number and density of structures (Fig. 5). At least part of the ditch surrounding the northern part of the settlement appears to have silted up and then been redefined as a series of sub-

rectangular pits – a pit alignment. The settlement also continued to encroach over this ‘boundary’ in Clusters 1 and 19. The total number of complete ring gullies that were identified more than doubled to 44. Another significant development was the appearance of a D-shaped enclosure ditch in Cluster 10 (Fig. 5), the northern side of which was defined by the settlement boundary. The ring gullies on the higher clay areas were evenly distributed in Clusters 1, 2, 3, 9 and 19.

Further down the slope, in the area of the gravels adjacent to the streams, the character of the settlement appeared to be different, with conjoined groups of ring gullies associated with attached enclosures in Clusters 4, 6, 17 and 21. Another significant new feature was a large elliptical enclosure adjacent to the palaeochannel in Cluster 13 with an internal annular ring gully and west-facing entrance. This structure (E9) was notably different from other gullies and enclosures on the site and might have had a ritual function, but no unusual artefacts were found within it. There did not appear to be any noticeable change in gully size; the buildings ranged from 4.5 m to 12.5 m in diameter, the average being 8.3 m.

The charred plant remains and animal bone suggest a continuation of the mixed farming regime identified in Period 3. Although cattle continued to be numerically the most important species, there was a high proportion of horse bones in Period 4 (20%). There continued to be evidence for iron smithing, and briquetage and quernstones made from Millstone Grit continued to indicate some long-distance trade links.

Period 5 (Late Iron Age) – The settlement appears subsequently to have contracted in size. Late Iron Age pottery forms were largely absent from the groups of ring-ditches on the higher-lying clay areas (including Clusters 1, 2, 3 19 and 20), which suggests that these areas were partly abandoned, with the principal focus of settlement shifting to the lower gravel areas adjacent to the streams (Clusters 15, 16 and 17 in Field 1, Clusters 4, 6, 7 and 21 in Field 2, and Clusters 13 and 14 in Field 3).

Late Iron Age pottery from the later recuts of features associated with the D-shaped enclosure in Cluster 10 suggested that this structure continued in use and it is possible that elements of the nearby Cluster 9 also continued into Period 5. The enclosure group

in Cluster 16 was also associated with Late Iron Age pottery. However, no Late Iron Age pottery was recovered from the fills of the ditches of the elliptical enclosure in Cluster 13. The number of complete ring gullies identified decreased to 23. In general there was only a slight increase in ring gully size, with buildings between 6 m and 12.5 m in diameter, averaging 8.4 m.

This phase was the most productive for charred plant remains, with samples rich in cereal grains being recovered from the post holes of a four-post structure in Cluster 17. Barley was more abundant, possibly for use as animal feed or because it is more tolerant of poorly drained land. Amongst the animal bone assemblage, the proportion of horse decreased. As in Period 4, there was widespread, although slight, evidence for metalworking and other high temperature processes. Imported stone items, including Millstone Grit from the Pennines and 11 fragments of briquetage continued to indicate some long distance trade.

Period 6 (Romano-British) – Settlement features dating to the Romano-British period were apparently restricted to the north-western corner of the site in Clusters 11 and 12 (see [Fig. 3](#) above). Part of a small rectilinear structure in Cluster 11, possibly a timber building, appeared to be enclosed by a re-cut of the former settlement boundary ditch and a return of this ditch immediately to the west of the modern Covert Farm. Further west, in Cluster 12, a larger rectangular enclosure was attached to the southern side of the boundary ditch. The pottery assemblage could be closely dated to the mid-late second/early third century AD, with the samian dating to the first half of the second century AD.

The absence of any first-century AD material suggests that the site may have been abandoned during or after the Conquest. The Roman road, followed by the modern A5, seems to have been built through the main area of Late Iron Age occupation. The Cluster 11 settlement and the enclosure at The Lodge site nearby appear not to have been fully established until the second century AD. Abandonment of both sites by or during the third century AD may have been linked to the final silting of the streams.

Interpretation and discussion

The excavation has made a significant contribution to answering some of the initial questions about the changing nature of the settlement through time, and its social and economic structure. It is suggested that the apparent grouping of the ring gullies in all the Iron Age periods at Crick were associated with distinct family units and that each of the buildings within each group may have had a particular function. There may have been buildings for specific domestic activities such as cooking or weaving, whilst other buildings may have acted as the sleeping quarters for different family members. Other gullies might have surrounded animal pens rather than dwellings. A number of four-post structures were identified, which may have been raised grain stores. Each store may have served the adjacent 'family group'. The identification of building function is not assisted by the general absence of internal features such as cooking hearths. However, an attempt was made to identify 'living huts' and 'ancillary huts' for each hut grouping by considering the detailed distribution of the finds, metalworking debris and evidence of burning. As an example, [Figure 6](#) shows the distribution of pottery amongst the structures belonging to Period 4.

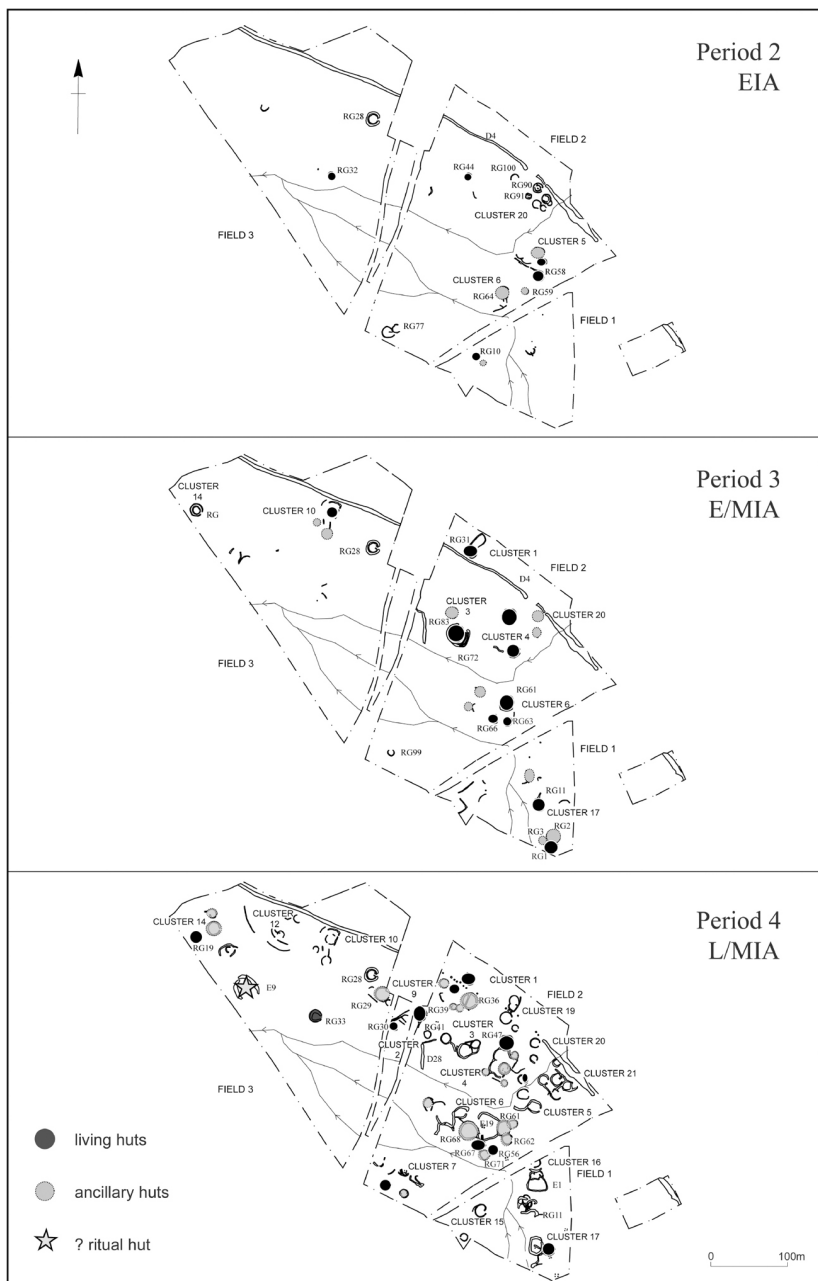


Fig. 5. Crick Covert Farm: the distribution of living and ancillary huts in Periods 2, 3 and 4, subphase 1 (drawing: G. Hughes and N. Dodds).

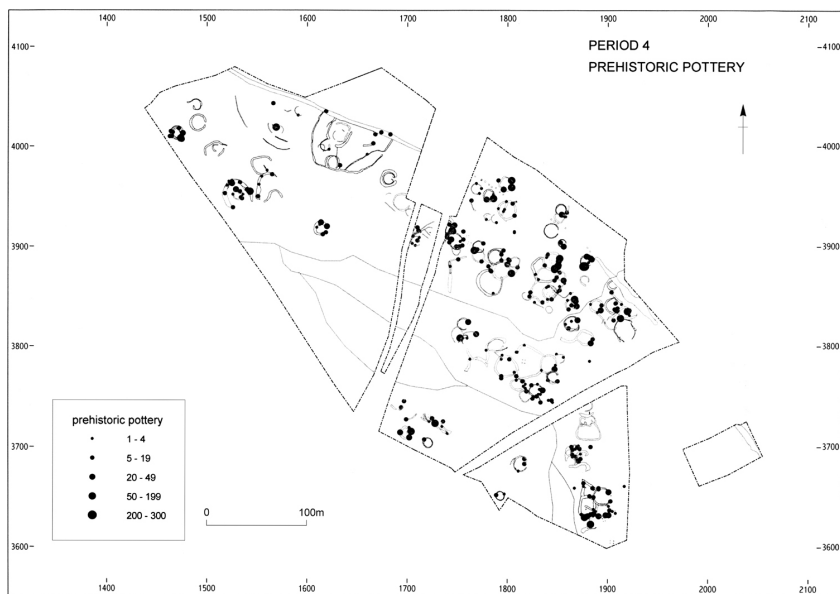


Fig. 6. Crick Covert Farm: the distribution of Iron Age pottery in Period 4, subphase 2 (drawing: S. Watt).

Large concentrations of pottery, animal bone (food debris) and evidence for burning, presumably from hearths, were interpreted as evidence for domestic ‘living’ activities. It was felt that these concentrations were a reasonable reflection of depositional activity taking place either when the buildings were occupied, or during the process of abandonment. The relatively unabraded nature of the artefacts suggested that they had not been subjected to significant post-depositional disturbance. These concentrations of material contrasted with the artefactual evidence from other structures, which was of a slighter nature, or entirely absent. These other structures were taken to have functioned as ancillary huts, used for storage, for penning animals, or for sleeping. The rare evidence for craft activities and metalworking usually came from ‘living’ structures, although occasionally the metalworking debris derived from an ancillary hut. Many of the structures in Periods 2, 3 and 4 could be ascribed a function as living or ancillary huts on the basis of this analysis, and the resulting patterns for these phases are summarised in [Figure 5](#) above.

An estimate of changing population size is problematic. It is likely

that the evidence for a number of the earlier buildings will have been lost by truncation. In addition, we cannot be sure of the extent of settlement beyond the excavation boundaries, although we know that it did continue to the north-west and to the south. However, if we assume 1 person per 10 m² of floor space (cf. Cook and Heizer 1968), the potential population for Period 2 within the Crick Covert Farm site would be in the region of 41 (based on a total 'domestic' floor space of 406 m²). This increases to approximately 140 in Period 3 and to 240 in Period 4. In Period 5, there was an apparent drop in population to around 136. However, as we have seen above, an attempt has been made to distinguish between living huts and ancillary huts. Assuming that many of the buildings surrounded animal pens or had other non-domestic functions, the population estimates for each period would then have to be revised down considerably, and perhaps halved.

Despite the obvious shortcomings of this exercise, it does at least give an indication of the likely relative changes in the population by period. In terms of zonation, there appear to have been significant changes through time, noticeably from the fairly dispersed nature of the settlement structures in Period 3 to the greater degree of clustering in Period 4 and the clearer distinction between enclosed and unenclosed elements.

At the minimum of 16 hectares, the overall size of the settlement is very large – roughly 16 times as extensive as the area excavated at Cat's Water, Peterborough (Pryor 1984). Both sites are far larger than most other Iron Age enclosures known in Northamptonshire. In fact, the D-shaped enclosure, which forms one small component of the Period 5 layout at Crick, is of a similar size to ditched enclosures such as those at Aldwinckle, Weekley, and Wakerley (Dix and Jackson 1989, appendix I). However, its surrounding gully was considerably slighter than the defensive ditches associated with such sites. The significant boundary feature at Crick is the northern ditch and pit alignment, but this only defines one side of the site, and furthermore, was apparently disregarded in part during both the Middle Iron Age phases. Some of the Late Iron Age ditched enclosures in the gravel zone (Period 5) were roughly similar in size to smaller enclosures such as those excavated at Blackthorn, Brigstock, or Wootton Hill Farm (*ibid.*). However, the latter served

to enclose the settlement structures, whereas at Crick the circular huts are located on the perimeters of the enclosures, often with their entrances facing out rather than inwards.

The settlement was located at the watershed of several river basins, and adjacent to an important natural north– south route, which was subsequently used by a Roman road, the railway, canal, and M1 motorway. However, the evidence for exchange – a few sherds of briquetage, granitic pottery and quern fragments made from Millstone Grit – was not substantial. Evidence for craft activities included small-scale metalworking such as iron smithing. Perhaps the most difficult question to answer is whether the site was permanently occupied, or whether it was settled only on a seasonal basis?

Throughout much of the excavation, it was thought that the site could only have been occupied during the summer months. This view may have been prejudiced by the severe flooding experienced during the spring of 1998 – in terms of the sensory themes being explored, the sense of being very damp was dominant! The idea of seasonal occupation was supported by a number of other observations. The low incidence of storage pits may have been related to the problem of potential waterlogging on the site, but the number of other possible storage areas, such as the four-post structures, was also very low. Neither were there any clear field boundaries adjacent to the site, and very few objects associated with crop processing were recovered. There were just eight quern fragments from phased Iron Age contexts.

The absence of structural evidence for the buildings themselves, leaving only the surrounding drainage gullies, might suggest use of temporary, perhaps portable, buildings. This could support the idea of an intermittent, seasonal occupation. However, as suggested above, the absence of post holes or foundation trenches does not preclude the possibility of substantial and permanent circular buildings. Furthermore, the subsequent examination of the charred plant remains identified the presence of weeds and cereal processing debris, suggesting that crops were grown and processed nearby; and the presence of domestic animals suggested a mixed economy. It thus seems probable that for much of the life span of the settlement there was at least some all-year-round activity. At the

same time, it may be that some occupation was seasonal, perhaps associated with trading and social activities at periodic gatherings. This might explain the great variety in building arrangements amongst the different settlement clusters. The high incidence of horse bones in Period 4 may indicate the rounding up of semi-feral animals for training, and their dispersal through social transactions to other occupation areas.

Depositional study

As we have seen, the finds plots were used to try to identify domestic and ancillary structures. In addition, the distribution of finds *within* each ring gully was studied in a more detailed manner. This allowed the identification of any recurring patterns of distribution that may have resulted from preferential deposition of different materials, or the deliberate placing of certain deposits. The spatial positioning of different material categories – mainly pottery, animal bone and residues of burning – was examined in relation to the front and back, and left-hand or right-hand sides of individual gullies. Left-hand and right-hand are defined as if one is looking outwards from a hut, through the entrance.

The study could only be undertaken for ring gullies with a well-defined entrance, a complete or near-complete plan, and where segments had been excavated in all, or most, sectors of the gully. The resulting sample was therefore highly selective, and for the earlier periods was rather small. It is assumed that the material entering the gullies came from the vicinity of each structure, and not from other areas of the site, or from communal middens located on its periphery. The great variation in deposition patterns between the different structures would support this assumption. It is further suggested that the material derived from layers and deposits outside the structures, not directly from activities undertaken within them. In other words we are arguing that the material was most probably derived from dumps or midden areas sited close to the structures. Pryor (1984, 215) put forward a similar idea in relation to the gully fillings at Cat's Water.

The categories of material studied were pottery, animal bone, charcoal, baked clay and stone. The analysis concentrated on the pottery and bone along with the evidence for burning. The

percentage occurrences of charcoal and baked clay were recorded systematically throughout the excavation. At the outset, it was thought that much of the stone found in the gullies was burnt, but geological study by Rob Ixer demonstrated that this was not the case; although some pieces were burnt, others possessed a red or black colouration due to limonite staining (movement of iron on-site due to groundwater action). The incidence of stone was recorded on site by context, and for selected sample areas, the stones were recorded by size ranges. The numbers of structures where data suitable for analysis were recorded are as follows: Period 2, three structures; Period 3, eight structures; Period 4, 19 structures; Period 5, 11 structures. The results of the analysis are summarised in [Figure 7](#).

Periods 2 and 3 – Due to their small number, the suitable gullies from Periods 2 and 3 are considered together. Relatively few structures survived well enough for the criteria for internal spatial analysis to be fulfilled. Also, where gullies from these early periods had continued in use into later phases, the surviving stretches of fillings belonging to Periods 2 and 3 were not extensive. Animal bone fragments display a strong spatial pattern: whenever *back* segments of gullies were excavated, these contained concentrations of bone. In contrast, charcoal and baked clay almost always occurred in gully terminals, although these could be the right-hand or the left-hand one. Pottery, as in the later periods, was deposited mainly in gully terminals, but in these early phases usually with a concentration in one terminal only ([Table 2](#)). Charcoal and baked clay showed a similar pattern of deposition to the pottery. It can be concluded that the distribution of the different material deposits does seem to have been patterned in Periods 2 and 3. In some ways the patterns prefigure some more distinct configurations found in the later periods, but in other ways, such as the occurrence of animal bone concentrations at the back of structure gullies, they were unique.

Period 4 – The structures fell into two distinct groups ([Fig. 5](#) above). In the upper sector of the site, the more dispersed groups of structures were unenclosed (Group 1), whilst in the lower gravel zone the structures in each group tended to be connected by

enclosing gullies (Group 2). The structures from each major zone will be considered separately, because they display rather different patterns of material deposition. The unenclosed hut clusters of Group 1, which are more similar morphologically to the groupings found in Periods 2 and 3, display the following strong patterns of deposition within their gullies. Animal bone fragments were slightly more common in left-hand terminals or gully sides, while charcoal and burnt clay strongly occur in right-hand terminals ([Table 2](#)). Pottery tends to occur in terminals: often in both terminals of a structure, or especially in the right-hand one. Ceramic deposition also occurs at the back of a structure in three cases.

The unabraded nature of the pottery and the common incidence of many sherds from single vessels in individual contexts indicate that some of these deposits may have been deliberate and possibly inserted when a structure was abandoned. The locations for such deposits appear to have been firmly prescribed as the front of the structure, within the gully terminals, or occasionally at the back. In many cases, one terminal only was preferred, and this was more commonly the right-hand terminal. The animal bone was far more fragmented, and it seems probable that this, and the burnt materials, derived from dumps or middens. The bone will have been the surviving debris from meals, whilst the charcoal and baked clay will have derived from hearths and ovens used mainly in cooking. The strong spatial patterning of the bone and burnt deposits suggests that these materials may have been dumped or stored outside different sides of the house: food debris to the left, hearth sweepings to the right (looking outwards from the structure).

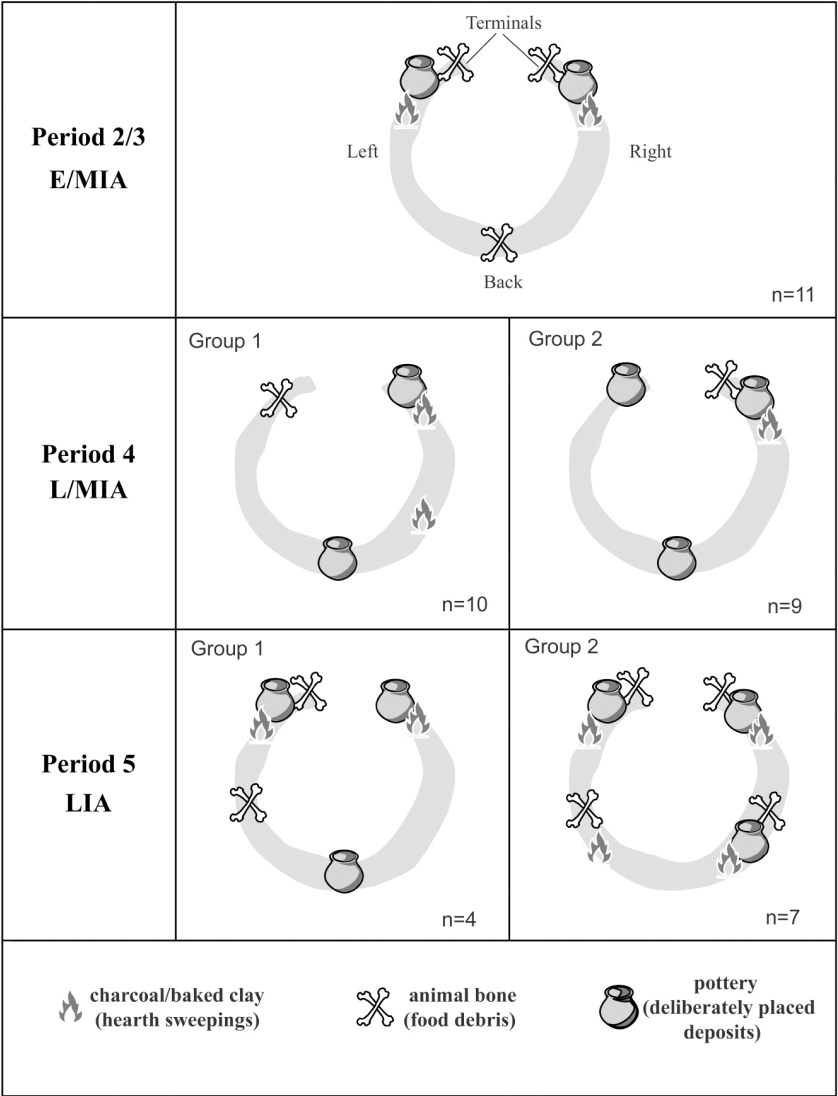


Fig. 7. Crick Covert Farm: patterns of deposition in ring gullies (drawing: A. Woodward and N. Dodds).

<i>Period</i>	<i>Artefacts</i>	<i>Both terminals</i>	<i>LH terminal or side</i>	<i>RH terminal or side</i>	<i>Back</i>
2/3	animal bone	2	2	4	4
	charcoal/burnt clay	2	5	5	—
	pottery	2	4	4	1
4 (Group 1)	animal bone	2	5	3	—
	charcoal/burnt clay	1	2	6	—
	pottery	3	1	4	3
4 (Group 2)	animal bone	2	2	6	—
	charcoal/burnt clay	4	1	4	—
	pottery	—	4	7	4
5 (Group 1)	animal bone	2	3	—	—
	charcoal/burnt clay	4	—	—	—
	pottery	3	—	1	1
5 (Group 2)	animal bone	1	5	1	—
	charcoal/burnt clay	1	5	2	—
	pottery	1	3	2	1

Table 2. Crick: the location of artefact concentrations in ring gullies.

Within the Group 2 huts of the lower gravel zone, the patterning was slightly different. Charcoal and baked clay again tend to occur more frequently in right-hand terminals (Table 2). Pottery again tends to occur in terminals only, or at the back of a structure; it occurred more evenly to right and left than in the higher zone but the right-hand terminal was apparently still slightly preferred. Animal bone fragments also tend to occur in right-hand terminals.

This evidence may indicate that dumps of domestic material were being grouped together outside the right-hand side of the structure, rather than being separated into bone and ash heaps as they were in the upper occupation zone. The practice of placing pottery deposits in the terminals, or in the back of the gully, was similar, although a particular preference for the right-hand terminal was less evident than in the upper clay zone.

Period 5 – There were again two main zones of occupation: complex enclosed groups (Group 2) on the gravel, defined now by wider and deeper ditches, contrasting with small unenclosed structure groups (Group 1) in the upper sector of the site, which by now had become partly abandoned. The distributions of materials within the gully fillings of Group 1 structures in the upper zone show many similarities to those discerned in this same zone in Period 4. Animal

bone fragments tend to derive from left-hand terminals, or the left side (Table 2). Pottery tends to occur in terminals only – often both terminals of any one gully, and sometimes at the back – while charcoal and burnt clay occur in both terminals.

The earlier patterning of charcoal and burnt clay towards the right-hand side of structures is not apparent. Thus, whilst the evidence suggests that food residues (animal bones) were dumped left of the structures, hearth sweepings may have been deposited to either side, or perhaps more likely from the patterns observed, on *both* sides of the entrance.

In the lower gravel zones, the patterning established for the Period 4 Group 2 structures can no longer be substantiated. Deposits of pottery still occur mainly in gully terminals, but the overall distributions of pottery, bone, and charcoal present a more even pattern (Table 2). This phenomenon has already been noted in relation to the lack of differential patterning between living huts and ancillary structures; it seems even more marked when the detailed incidences of pottery, bone, and burnt material are considered. However, within the ditched Clusters 4, 6, 7 and 17 of Group 2 there is an overall tendency for deposition to have been in left-hand rather than right-hand positions.

Spatial and temporal trends

Detailed consideration of the material within the fillings of individual structure gullies has led to the definition of a series of interesting patterns (see Fig. 7). Pottery and, in most instances, stones tended to be deposited in groups within particular sectors of the hut ring gullies. It is possible that this happened at or soon after the time of abandonment. The pottery and stone may have come from middens and activity areas located close to the buildings, while some of the larger groups of pottery which included relatively large fragments from just a few vessels, may have been placed deliberately, with symbolic intent. The gully sectors selected for the acts of deposition appear to have been closely prescribed. Deposits were nearly always placed within gully terminals, or, during Periods 4 and 5, sometimes at the back of hut gullies.

The animal bone fragments and remains of ‘burning contexts’ (charcoal and baked clay) all seem to have derived from dumps of

material located in the immediate exterior vicinity of the various structures. These dumps were probably domestic middens. The varying distribution of these particular deposits through the different periods may indicate that the preferred locations for these dumps changed through time. Thus in Periods 2 and 3 (Late Bronze Age/Early Iron Age to early Middle Iron Age), material came from near the entrance, and some bone came from behind the building. In Periods 4 and 5 (later Middle and Late Iron Age) in the upper occupation zone, characterised by unenclosed Group 1 structures, bone came from the left of the building and charcoal mainly from the right. But in the lower gravel zone, the area of enclosed Group 2 structures, bone and charcoal both came from the right (in Period 4) or from both sides equally (in Period 5).

Although there are significant changes through time, the main contrast appears to be between the unenclosed groups (Group 1) of the upper zone with their strongly patterned deposits; and the enclosed groups downhill (Group 2), which displayed much more generalised distributions from the outset (in Period 4). In the upper zone (Group 1) the strong similarity in patterning through Periods 4 and 5 may indicate continuity of occupation by a single social group. In Period 4 the pattern of deposition employed by this group contrasted markedly with that employed in the lower zone (Group 2); this may denote the existence of a separate social group in this area during Period 4. However, this pattern in the lower zone did not continue into Period 5. Thus there may have been some significant change in the population occupying the lower zone by Period 5, whilst settlement in the upper zone may have been more long-lived and conservative in its everyday spatial behaviour.

Cat's Water revisited

At Cat's Water, a Middle and Late Iron Age settlement lasted without a break from the fourth or third century BC to the mid first century AD, and consisted of a series of penannular hut gullies, smaller structures and drainage ditches belonging to several phases of construction (Pryor 1984, fig. 18). The settlement covered about one hectare and was situated on the extreme edge of the Fen, which flooded in winter. Faunal, floral and environmental data indicate that the settlement was occupied all year round. Cattle were slightly

more common than sheep, with fish and wildfowl providing an important supply of protein in winter, while cereals may have been obtained ready threshed from other sites located on slightly higher ground.

The site was virtually totally excavated and comprised 20 major gully structures in the Middle Iron Age period and ten in the Late Iron Age (*ibid.*, 213–23). The structural evidence indicated that the gullies were eaves-drip drains surrounding circular buildings, the wall foundations of which survived in a few cases (*ibid.*, 214). The Late Iron Age population may have been between 20 and 25 individuals, possibly the members of five families along with their livestock. Pryor argued convincingly that the artefactual material found in the fills of the penannular gullies was derived from activities that had taken place outside the buildings and not from floor sweepings. Moreover he was able to demonstrate that the finds of pottery and flint displayed strong patterning in some of the gullies but not in others.

The gullies with patterned finds distributions were interpreted as reflecting repeated human behaviour in and around living huts, whilst the structures displaying poor or no patterning were thought to be ancillary buildings provided particularly for stock. This interpretation was confirmed by phosphate analysis, which showed up high levels of phosphate, primarily from animal manure, in the ancillary structures, but not in the living huts. Although lists of structures with patterned and unpatterned distributions were provided in the text by Pryor, the overall layout of the probable living and ancillary huts within the two main phases was not illustrated. Such interpretative plans are provided here (Fig. 8). As at Crick, there was no correlation between structure size and implied function: there were some small living huts and some large ancillary buildings and vice versa.

Pryor concluded that about half of the major gullies represented living houses in both main site phases. He viewed the overall layout as the settlement area of a single social unit. He noted that the structures did not appear to occur in pairs of one living house and one ancillary structure, but that the ancillary huts seemed to be concentrated in central areas enclosed by the main ditched enclosures, while the houses tended to be sited on the periphery of

the occupied area (Pryor 1984, 218). This was particularly noticeable in the Late Iron Age phase (see Fig. 8, lower).

The clustering of buildings in the two phases can be considered in more detail, using the principle of nearest neighbour analysis. If the main drainage ditches are first of all ignored, the Middle Iron Age plan breaks down into seven small clusters, each of two to four structures. Each cluster usually included living and ancillary buildings, but two contained living huts only. In the Late Iron Age phase, there were only two clusters – one in the north and north-east sector and a second to the south – each of five structures, comprising three living houses and two ancillary buildings. If the main drains were boundaries between groups, similar analysis suggests that in the Middle Iron Age there were eleven clusters of between one and three huts, whilst in the Late Iron Age there were four small clusters, each of one or two buildings, in the north and east sectors, with a single large cluster of five structures to the south. Whichever interpretation is preferred, a clear trend from a widely dispersed distribution of small clusters in the Middle Iron Age period to a more confined and nucleated pattern in the Late Iron Age can be discerned.

The settlement at Crick Covert Farm was considerably larger than that at Cat's Water and has not been totally excavated. However an overall trend from a dispersed pattern of very small occupation units, usually with living and ancillary structures, to a more nucleated pattern of enclosed units of varying size has been demonstrated for both sites. The rectilinear pattern of main drainage ditches at Cat's Water was not present at Crick, but the Period 4 and 5 clusters in the lower gravel zone at Crick were characterised by enclosure ditches which were considerably deeper than the hut gullies. From Middle Iron Age to Late Iron Age, on both sites, there seems to have been a threefold trend involving a greater degree of enclosure of clusters; greater differentiation between the sizes of individual clusters; and an overall decline in settled area and, presumably, total population.

The Cat's Water report, way ahead of its time, provided detailed structure plans showing the distributions of pottery, flint and other finds, although not, as the excavator regretted, of animal bone fragments (*ibid.*, 214). It was noted that pottery in particular tended

to occur in the gully terminals. By referring to the finds plans, it has been possible to record the incidence of concentrations of material in the two terminals or elsewhere around the gullies. These data are summarised in [Table 3](#). It can be seen that in the Middle Iron Age there was a strong bias towards the deposition of pottery in right hand terminals (as viewed when looking out from the hut entrance). Only two examples of Late Iron Age gullies were complete enough to allow analysis, but when these are added to the Middle Iron Age instances this pattern is strengthened.

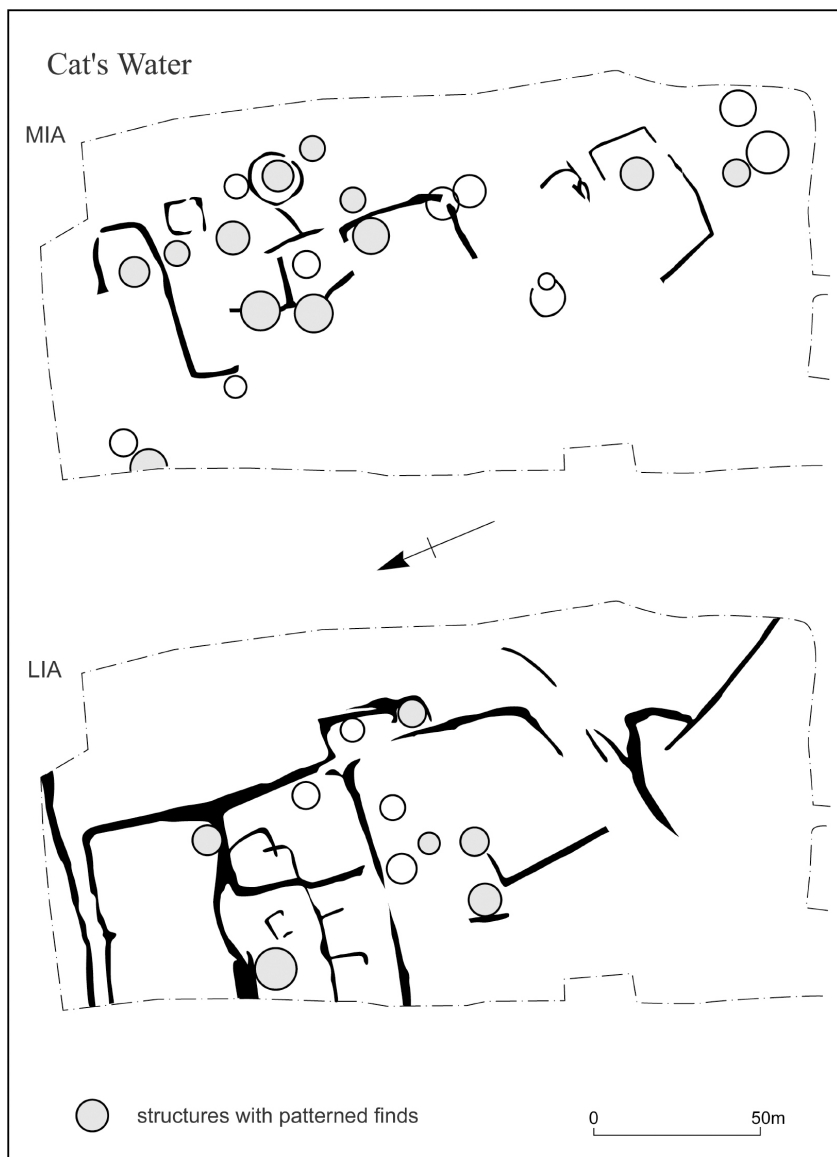


Fig. 8. Cat's Water: the distribution of structures with patterned finds (drawing: A. Woodward and N. Dodds).

It is not possible to compare this pattern with the detailed evidence from Crick Covert Farm because the distributions of animal bone, charcoal and ash were not plotted at Cat's Water. But the strong tendency for finds of all categories to be concentrated in

right-hand terminals was a significant element within the patterns discerned at Crick; and right-hand terminal pottery concentrations were characteristic of one of the site phases there, Middle Iron Age (Period 4) gullies in the lower gravel zone. Whether such specific patterns were formed in other parts of Northamptonshire can only be assessed when more Iron Age sites have been extensively excavated, and their finds assemblages examined and plotted with such topics of enquiry in mind (cf. Haselgrove *et al.* 2001, 9–10).

<i>Phase</i>	<i>Structure number (Pryor 1984)</i>	<i>Figure number (Pryor 1984)</i>	<i>Location of concentration</i>
MIA	2	25, left	RH terminal
MIA	3, outer gully	27	LH terminal
MIA	13	39	both terminals
MIA	16	43	RH terminal
MIA	47	64	RH terminal
MIA	54	77	RH side/terminal plus quern; burial in LH terminal
MIA	56	82	RH terminal
LIA	4	29, left	RH terminal
LIA	20	47	both terminals
<i>Totals:</i>	<i>RH terminal, looking out</i>	<i>LH terminal, looking out</i>	<i>both terminals</i>
MIA	5	1	1
LIA	1	nil	1
Total	6	1	2

Table 3. Cat's Water: the location of pottery concentrations in living hut gullies.

Conclusions

Previous spatial analyses of finds categories in relation to Iron Age structures have concentrated mainly on the disposition of artefacts within roundhouses. The results have been used primarily to define different areas of activity within the roundhouse and the patterns discerned have been related both to practical considerations, such as the availability of daylight, and cosmological principles. However a detailed distributional analysis of artefact categories within the Glastonbury Lake Village has shown that, although clear patterning can be demonstrated, the various trends may relate to a variety of factors. These might include the disposition of original activity areas, but also may relate to the preferred positioning of special

objects or groups of material laid down as foundation deposits, or during the ritual closing of a building at the time of abandonment.

In contrast to such studies of interior space, consideration of finds from the fillings of eaves-drip gullies surrounding timber buildings may provide evidence for the detailed location of activities that took place outside the structures. Such an approach was instigated by Pryor (1984) in his interpretation of the gullies found on the Iron Age settlement at Cat's Water. In this paper, a similar approach has been developed and applied to the evidence from the very large settlement excavated at Crick Covert Farm. Again the data may need to be interpreted in various different ways. Some of the material may have entered the gullies by chance and may reflect the positioning of activities, middens and ash heaps in the immediate environs of the buildings, while larger groups of finds found as discrete deposits may represent deliberate placements, especially of pottery, at the time of abandonment of structures.

One particular trend within all these analyses has not been discussed extensively: this is the tendency for material to have been placed in right-hand or left-hand positions. We have noted that there appears to have been a strong preference for deposition in right-hand positions (when looking out from the inside of a structure). This applies to Iron Age roundhouses and enclosures and also to Late Iron Age shrines, although some enclosures do display a contrasting preference for higher levels of deposition in left-hand terminals. At Glastonbury, we have shown that finds were concentrated in a whole series of preferred locations: back-space, front-space and around the central hearth, and, once again there was a very strong tendency for finds to occur on the right-hand side of the interior or entrance space. The distribution of finds in the gullies at Cat's Water represents outside rather than indoor activities, but yet again a strong right-hand bias can be detected in the positioning of concentrations of artefactual material. Thus it might be argued that there was an overriding preference for right-handed placement of deposits during the Iron Age and that perhaps this was related to a generalised system of cosmological beliefs.

When one turns to Crick, with its much more extensive database, some more complex patterns emerge. Some of the phases of structures display strong right-hand preferences for deposition, but

others show left-hand preferences, and furthermore placement sometimes varies according to the type of material deposited within any one phase. In the Middle Iron Age structures in the two different geographical areas of the site, both groups displayed right-handed concentrations of fire sweepings and pottery. But animal bone (food debris) was found more in left-hand terminals in the upper sector of the site and more in right-hand positions in the lower zone.

In the Late Iron Age the left-hand pattern for animal bone in the upper part of the site continued, but in the lower zone a completely new pattern emerged. This involved a generally more even distribution of finds, but with a tendency for all three classes of material to be deposited in left-hand locations. This provided a strong contrast with the pattern that prevailed previously in the lower sector, which was characterised by the right-hand positioning of all categories. It can be postulated that these differences may be symbolic signatures for a series of different communities occupying the site, with the visible positioning of activities and deposits providing clear and fundamental indications of social demarcation on an everyday basis.

Thus the preference for deposition in the right-hand area of houses, as one looks out from the doorway, may relate to factors other than the cosmological models summarised at the beginning of this paper. Those models relate the concentration of finds in the right-hand sectors of houses (or the left-hand, if looking in towards the interior) to specific activities, the availability of light and the daily movement of the sun. The aim of this paper has been to demonstrate that the patterns of finds distribution within Iron Age houses are far more complex than has hitherto been realised. A preference for right-hand locations relative to doorways is certainly evident, but other locations may be important for different classes of finds. In addition, various different processes of deposition may have been involved on any one site, and the finds resulting from these different processes – foundation deposits, finds lost during use, or closing deposits – may display very different specific patterns. Such patterns need to be unravelled before fuller interpretations can be attempted.

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Note

1. A 'Pen-map' system, along with CAD and GIS softwares, was used for feature planning and data capture. This also facilitated the generation of detailed spatial distribution plots of pottery, animal bone, charcoal, burnt clay, evidence for metalworking and other artefacts in relation to structures (as, for example, in Figure 6). Extensive sampling procedures for the retrieval of palaeoenvironmental information and for luminescence dating were also undertaken under specialist advice.

Bibliography

- Allen, T.G. and Robinson, M.A. 1993. *The Prehistoric Landscape and Iron Age Enclosed Settlement at Mingies Ditch, Hardwick-with-Yelford, Oxon*. Oxford: Thames Valley Landscapes, The Windrush Valley, Vol. 2.
- Barrett, J. 1987. The Glastonbury Lake Village: models and source criticism, *Archaeological Journal* 144, 409–423.
- Bennett, P. 2001. Castell Henllys: approaching the past, *The Archaeologist* 42, 28–31.
- Bulleid, A. and Gray, H. St G. 1911. *The Glastonbury Lake Village*, Vol. 1. Glastonbury: privately published.
- Bulleid, A. and Gray, H. St G. 1917. *The Glastonbury Lake Village*, Vol. 2. Glastonbury: privately published.
- Clarke, D. 1972. A provisional model of an Iron Age society and its settlement system, in D. Clarke (ed.), *Models in Archaeology*, 801– 869. London: Methuen.
- Coles, J. and Minnitt, S. 1995. *'Industrious and Fairly Civilized'. The Glastonbury Lake Village*. Exeter: Somerset Levels Project and Somerset

County Council Museums Service.

- Cook, S.F. and Heizer, R.F. 1968. Relationships among houses, settlement areas and population in aboriginal California, in K.C. Chang (ed.), *Settlement Archaeology*, 79–116. Palo Alto: National Press.
- Dix, B. and Jackson, D. 1989. Some Late Iron Age defended enclosures in Northamptonshire, in A. Gibson (ed.), *Midland Prehistory*. Oxford: British Archaeological Reports British Series 204.
- Fitzpatrick, A.P. 1994. Outside in: the structure of an Early Iron Age house at Dunston Park, Thatcham, Berkshire, in A.P. Fitzpatrick and E.L. Morris (eds), *The Iron Age in Wessex: Recent Work*, 68–72. Salisbury: Trust for Wessex Archaeology.
- Grimes, W.F. 1960. Some smaller settlements: a symposium, in S.S. Frere (ed.), *Problems of the Iron Age in Southern Britain*, 17–28. London: Institute of Archaeology Occasional Paper 11.
- Gwilt, A. 1997. Popular practices from material culture: a case study of the Iron Age settlement at Wakerley, Northamptonshire, in Gwilt and Haselgrove 1997, 153–166.
- Gwilt, A. and Haselgrove, C. (eds). 1997. *Reconstructing Iron Age Societies*. Oxford: Oxbow Monograph 71.
- Haselgrove, C. 2005. A trio of temples: a reassessment of Iron Age coin deposition at Hayling Island, Harlow and Wanborough, in C. Haselgrove and D. Wigg-Wolf (eds), *Iron Age Coinage and Ritual Practices*, 381–418. Mainz: Studien zu Fundmünzen der Antike 20.
- Haselgrove, C., Armit, I., Champion, T., Creighton, J., Gwilt, A., Hill, J.D., Hunter, F. and Woodward, A. 2001. *Understanding the British Iron Age: An Agenda for Action*. Salisbury: Trust for Wessex Archaeology.
- Hawkes, S.C. 1994. Longbridge Deverill Cow Down, Wiltshire, House 3; a major round house of the Early Iron Age, *Oxford Journal of Archaeology* 13, 49–69.
- Hill, J.D. 1995. *Ritual and Rubbish in the Iron Age of Wessex*. Oxford: British Archaeological Reports British Series 242.
- Jackson, D. 1975. An Iron Age site at Twywell, Northamptonshire, *Northamptonshire Archaeology* 10, 31–93.
- Jackson, D. 1977. Further excavations at Aldwincle, Northamptonshire, *Northamptonshire Archaeology* 12, 9–54.
- Jackson, D. and Ambrose, T.M. 1978. Excavations at Wakerley, Northants, 1972–5, *Britannia* 9, 115–242.
- Jackson, D. and Dix, B. 1987. Late Iron Age and Roman settlement at Weekley in Northants., *Northamptonshire Archaeology* 21, 41–94.
- Kuper, A. 1980. Symbolic dimensions of the Southern Bantu homestead, *Africa* 50, 8–23.

- Kuper, A. 1982. *Wives for Cattle: Bridewealth and Marriage in Southern Africa*. London: Routledge and Kegan Paul.
- Oswald, A. 1997. A doorway on the past: practical and mystic concerns in the orientation of roundhouse doorways, in Gwilt and Haselgrove 1997, 87–95.
- Parker Pearson, M. 1996. Food, fertility and front doors in the first millennium BC, in T.C. Champion and J.R. Collis (eds), *The Iron Age in Britain and Ireland: Recent Trends*, 117–132. Sheffield: J.R. Collis Publications.
- Pope, R. 2003. *Prehistoric Dwelling: Circular Structures in North and Central Britain c. 2500 BC–AD 500*. Unpublished Ph.D. thesis, University of Durham.
- Pryor, F. 1984. *Excavation at Fengate, Peterborough, England: The Fourth Report*. Northampton: Northamptonshire Archaeological Society Monograph 2/Royal Ontario Museum Archaeology Monograph 7.
- Smith, A. 2001. *The Differential Use of Constructed Sacred Space in Southern Britain, from the Late Iron Age to the 4th Century AD*. Oxford: British Archaeological Reports British Series 318.
- Tratman, E.K. 1970. The Glastonbury Lake Village: a reconsideration, *Proceedings of the University of Bristol Spelaeological Society* 12, 143–167.
- Williams, J.H. (ed.). 1974. *Two Iron Age Sites in Northampton*. Northampton: Northampton Development Corporation Archaeological Monograph 1.
- Williams, J.H. and Mynard, D.C. 1974. Two Iron Age Enclosures at Moulton Park: the excavations, in Williams 1974, 5–19.
- Williams, J.H. and McCarthy, M.R. 1974. A Double Ditched Enclosure at Blackthorn: the excavation, in Williams 1974, 44–55.

Ritual and the roundhouse: a critique of recent ideas on the use of domestic space in later British prehistory

Rachel Pope

Introduction

This paper offers a critique of recent work on British Iron Age cosmologies, which are seen as centred on sun worship and expressed through use of domestic space.¹ The first part of the paper examines the methodologies which underpin the cosmological model and the problems inherent in the use of structuralist theory, formal analogy and narrative, advocating a move away from structuralism towards a contextualised prehistory of everyday life. Our current understanding of the orientation data is also assessed. In the latter part of the paper, an alternative model is proposed, drawing on the author's doctoral research on prehistoric and Roman period roundhouses in north and central Britain. Alongside a degree of variation, spatial and structural analyses of a database of 1178 roundhouses² point to the organisation of domestic space around centre/periphery and front/back distinctions. Whilst the former appears to be a conscious organising principle, the latter seems to be more a result of the subconscious desire for light and contact, alongside the potential for privacy.

Defining the cosmological model

'The orientation of the entrance toward the rising sun marks the passing of night and of the seasons, whilst the "sunwise" organisation of daily and seasonally-referenced activities around a central hearth mimics... the diurnal movement of the sun

around the southern half of the house' (Haselgrove 2004, 18)

In the late 1980s, mainstream Iron Age studies turned increasingly to structural anthropology and to Neolithic studies in an attempt to enhance interpretation. From structural anthropology we realised that ideologies and cosmologies – where social rules and beliefs constitute an understanding of the wider world – had a role as structuring principles³ in past human behaviour and thus have relevance to the study of past material culture (*contra* Hawkes 1954). From Neolithic studies, we developed 'prehistoricisation': the attempt to recognise the real *difference* of Iron Age life rather than interpret later prehistory according to our own modern, Western and inherently functionalist criteria (cf. Hill 1989). Roundhouse studies were particularly ripe for the introduction of these new ideas, with earlier work being criticised for placing too much emphasis on the physical properties of prehistoric houses, rather than on their function and spatial arrangements (Reid 1989). With an increasing number of researchers taking the view that human action in later prehistory could not be explained in purely functionalist terms, the result was an injection of 'ritual' into that area which most epitomised functionality: the domestic sphere. It is the cosmological model that embodies this process.

The foundations of the model were laid in the mid 1980s, following observations by Wait (1985) and Boast and Evans (1986), regarding the potential ritual associations of roundhouse orientation. Their respective arguments were that houses had similar patterns of orientation to shrines and that the 'public' ritual traditions of the Later Neolithic–Earlier Bronze Age were transferred into the domestic arena in the Later Bronze Age. Inspired by theoretical interpretation in Neolithic studies, J.D. Hill began to explore the topic of orientation in southern England (Hill 1988; 1989; 1996), whilst Mike Parker Pearson was considering the division of space within the roundhouse (Parker Pearson and Richards 1994a; Parker Pearson 1996). In addition, Andrew Fitzpatrick was thinking about prehistoric time, as related to the roundhouse, by considering later Neolithic henges and Early Bronze Age barrows, alongside the themes of circularity and the form and movement of celestial bodies (A. Fitzpatrick pers. comm.).⁴ Ideas regarding house orientation – upon which much subsequent work hinges – were then tested by Al

Oswald,⁵ who concluded that in the British Iron Age, orientation was dominated by ritual concerns, namely sun worship (Oswald 1991; 1997).

This work culminated in the suggestion that life inside the Iron Age roundhouse was ritually structured. Following Chadwick's (1960) interpretation of north/south division of domestic space for sleeping and living at Longbridge Deverill Cow Down (Wiltshire), Fitzpatrick (1994) recognised a left/right division of space in another Early Iron Age house at Dunston Park (Berkshire). Fitzpatrick linked this division of space to cosmological referents – in particular the passage of time – and more tentatively to orientation. Following this, Parker Pearson (1996; 1999) formed a connection between Oswald's (1991) orientation, Fitzpatrick's (1994) division of space, and the movement of the sun and of time, around the house. This was supported by the 'guiding' nature of the entrance kerbs at the Scottish wheelhouses of Sollas and A'Cheardach Bearg, where activities were also apparently split between the left and right sides of the house (Parker Pearson and Sharples 1999). Within just a decade, construction of the cosmological model was complete and was guiding interpretation on prehistoric South Uist at Dun Vulan broch and at the Late Bronze Age–Early Iron Age settlement of Cladh Hallan (Marshall *et al.* 1999; Parker Pearson and Sharples 1999).

In its most developed form (Parker Pearson 1999), the cosmological model was welcomed with some degree of caution (Aldhouse-Green 1999; Cunliffe 1999; Hingley 1999; Ralston 1999) and deconstruction has already begun amongst those engaged in research into later prehistoric houses. Brück (1999a, 325), for example, has suggested that such work has inadvertently strengthened the functional/ritual dualism in archaeology, whilst Hunter (1999) has contested claims regarding a left/right distribution of finds in wheelhouses. Both Brück (1999b) and Webley (2003) stress diversity in the archaeological record and warn against synthetic and essentially static models that deny human agency. Recent attempts at testing the model at site level have found the archaeology to be considerably more complex than the model might suggest (e.g. Hodgson *et al.* 2001; Woodward and Hughes this volume) and the current author also found the model

wanting when tested against large datasets (Pope 2003). With such a degree of uncertainty surrounding its application, it is perhaps worrying that the model is beginning to be accepted in overviews of the period (e.g. Haselgrove 2004).

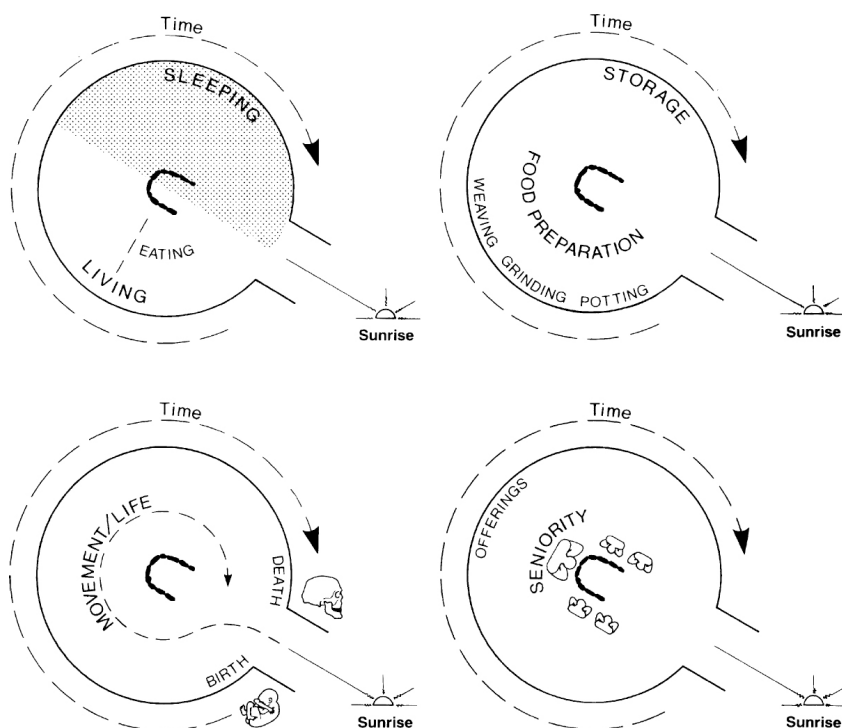


Fig. 1. The cosmological model (after Parker Pearson 1999).

Cosmologies and the use of domestic space

‘It is when meanings are applied cross-culturally, without reference to context, that the dangers emerge’ (Hodder 1986, 53)

In an early discussion of the use of space in roundhouses, Hingley (1990) identified centre/periphery organisation, based around the hearth. It was subsequently suggested, however, that the threshold was in fact paramount in influencing spatial division (Parker Pearson and Richards 1994a, 48; Hill 1996). In the cosmological model (Fig. 1), life in the roundhouse was organised around a light, activity-based southern side, with a dark, northern side for sleeping

and storage. The idea was that sun-based belief systems dictated use of space: people would work in the south side when the sun was in the southern sky, sleep in the north side when the sun was (invisible) in the night sky, and move around the structure in a sunwise direction (Parker Pearson 1999). This use of space was also seen as structuring gender and status in Iron Age society (*ibid.*; Parker Pearson and Richards 1994a). Essentially, we are claiming to understand prehistoric cosmologies, or social forms. If the arguments are found to be watertight, this is a real breakthrough for prehistoric studies. How well, however, does the underlying methodology stand up to scrutiny?

<i>Hingley (1990)</i>		<i>Parker Pearson (1996)</i>		<i>Fitzpatrick (1997)</i>	
public	private	light	dark	south	north
open access	constrained	left	right	living	sleeping
centre	periphery	south	north	right	left
light	dark	fineware	coarseware	light	dark
cooked	raw	consumption	preparation	day	night
clean	dirty	large	small	life	death
?day	?night	main entrance	secondary	public	domestic
?summer	?winter	east	west	centre	periphery
?culture	?nature	sacred	profane		
?fertility	?infertility	special	ordinary		
?life	?death	back	front		
?male	?female	dirty	clean		
		hidden	revealed		
		sheep/cattle	pigs		
		male	female		

Table 1. Binary oppositions employed in recent discussions of domestic space.

Archaeological problems with structuralist theory

‘This east–west structuring of space within houses and enclosures was also linked to classifications of men and women’ (Parker Pearson and Richards 1994a, 47)

‘inadequacies... derive not from the attempt to interpret meaning, since... the assignment of meaning to material culture is a necessary stage of analysis. Rather, the inadequacies derive from our limited information... and from an unwillingness to criticise the universality of our own assumptions’ (Hodder 1986, 45)

Much work on domestic space is heavily influenced by structural anthropology and its use of binary oppositions (cf. Parker Pearson and Richards 1994b, 10; 19). With their origins in the nature/culture dichotomy of The Enlightenment, binary oppositions were introduced to anthropology by the Victorian theoretician W.H. Rivers (Lévi-Strauss 1963, 161). However it was Lévi-Strauss' interest in social opposition that saw them flourish; his (1963) work on the Bororo village provided a seminal influence on the symbolic significance of built space and made binary oppositions 'part of the common theoretical currency of anthropology' (Carsten and Hugh-Jones 1995, 31). At the same time, Cunningham (1964) associated the ordering of space in the Atoni roundhouse with different social groups, and thus domestic space became symbolically representative of societal structures. Subsequent studies apparently recorded *subconscious* social rules as also structured according to binary oppositions and expressed through use of space (cf. Bourdieu 1973). However Bloch and Bloch (1980) state that many scholars mistakenly believed that the *social* device of opposition was itself a universal human state.⁶ In fact, in considering the relationship between social opposition and inequality, Lévi-Strauss specifically turned to communities, like the Bororo, who used the *spatial* device of opposition in settlement layout, as a neat way into understanding opposition-based structuring principles (1963, 139–40; 1983, 184).⁷

Early post-processual theory embraced structuralism at a time when anthropologists were developing theories of practice and structuration (cf. Hodder 1982a; pers. comm.). By the late 1980s, material culture was the manifestation of structured symbolic practice (cf. Tilley 1989, 188–9), but, like systems theory, the emphasis remained on structure at the expense of the individual. Unreconstructed structuralism, with its developed methodology, flourished. Prehistorians hoped to discover cosmological systems via structuralist interpretation of the material culture of houses: 'the task of the individual who studies a society is to examine the way in which binary oppositions were perceived within that particular society' (Hingley 1990, 132). In applying structuralism from anthropology, yet failing to place it in historical context and failing also to keep abreast with associated theoretical developments, our first mistake was believing opposition to be universal. A second

occurred when, following Boast and Evans' (1986, 195) use of the term 'spatial principles' in describing the spatial device of axis, Parker Pearson (1996, 117) used the term 'structural principles' regarding the device of orientation. Lévi-Strauss's (1963, 133) 'structural principles' were actually the ideologies, or cultural attitudes, behind societal structures: how a society understands concepts such as belief and gender. The consequence of these errors was that our focus became the spatial *device* rather than what it revealed.

Prehistorians first used binary oppositions in the interpretation of Neolithic houses (cf. Hodder 1984; Richards 1990) and they have subsequently been applied to those of the Iron Age (Table 1). Drawing heavily on the work of Malinowski (1948), Hingley suggested that the public/private dualism, as indicated by the differential use of central/peripheral space, reflected a whole range of oppositions based around ease of access, cleanliness, light levels, and the condition of food. To some extent these are argued from the evidence, but his second set of oppositions – about which he is admittedly more tentative – rely on formal analogy (see below). Parker Pearson and Richards (1994a, 65) accept that they only focus on societies that possess house-based cosmologies and recognise that many societies do not. Nevertheless, they remain fairly uncritical about their acceptance of the universality of opposition as a structuring principle (1994b, 10; 19). Even if opposition were universal, opposition as expressed through the organisation of domestic space certainly is not. Likewise, Parker Pearson (1996) fails to ground his opposition-based structures in their meaning content or use context (cf. Hodder 1986, 42; 53–5). Fitzpatrick (1997, 77–8) is more cautious, however, noting that the left/right model only applies to some houses in Early Iron Age Wessex.

Anthropologists began to voice concerns about binary oppositions at a relatively early stage (cf. MacCormack and Strathern 1980). The nature/culture dichotomy, upon which they are ultimately based, was no longer accepted as a universal human state. Historically situated, it is instead an artefact of the Victorian obsession with control and hierarchy: a political theory used to justify both imperialism and the exclusion of women from society

(Bloch and Bloch 1980; Strathern 1980). By the mid 1980s, anthropologists were highlighting the non-static nature of symbolic meaning in houses (Carsten and Hugh-Jones 1995, 23), with Rapoport (1990) stating that the link between architecture and human behaviour was by no means implicit. Structuralist interpretations of domestic cosmologies are now considered simplistic, lacking both an appreciation of the dynamics of the house and an understanding of agency (Barrett 1994, 90; 1997; 2001, 157–160; Carsten and Hugh-Jones 1995, 37, 46). The lack of regard for time-depth is a particular concern for archaeologists. These points are neatly drawn together in recent studies which state that the meanings of domestic space are not inherent in its organisation but constantly shift with social practice, as different meanings are given by different people in different contexts (Brück 1999b, 159; Gerritsen 2003; Webley 2003, 66). Lévi-Strauss did advise us to ‘treat the apparent manifestations of dualism as superficial distortions of structures whose real nature is quite different and vastly more complex’ (1963, 161).

Early criticism of structural anthropology focussed on gender and pointed out a marked tendency towards androcentrism. Much structuralist thought displays a distinctly Marxist view of gender division, one of power and status, with anthropological studies of the 1960s and early 1970s heavily concerned with outlining a link between masculinity and social power (e.g. Bourdieu 1973).⁸ We can trace these ideas back at least to The Enlightenment, when the social role of women conformed to Classical ideals of woman as inferior to man, as nature is to culture (Bloch and Bloch 1980). These ideas are so heavily rooted in modern Western thought that they are still frequently accepted as a truism. Anthropology frequently provides good examples of this, as modern Western male interpretations of contemporary ethnographic gender roles reveal the enduring classification of female as object and commodity. Classic examples, each a strong influence on recent archaeological thought, include Levi-Strauss’ (1969) work on the *exchange of women* as the basis for social organisation, and Hodder’s (1984) concern with male *control of women* as related to reproduction. We must recognise, however, that much of our early understanding of social organisation was based on male anthropologists documenting

non-Western, male perspectives of ethnographic society for an imperialist male audience (MacCormack 1980, 14).

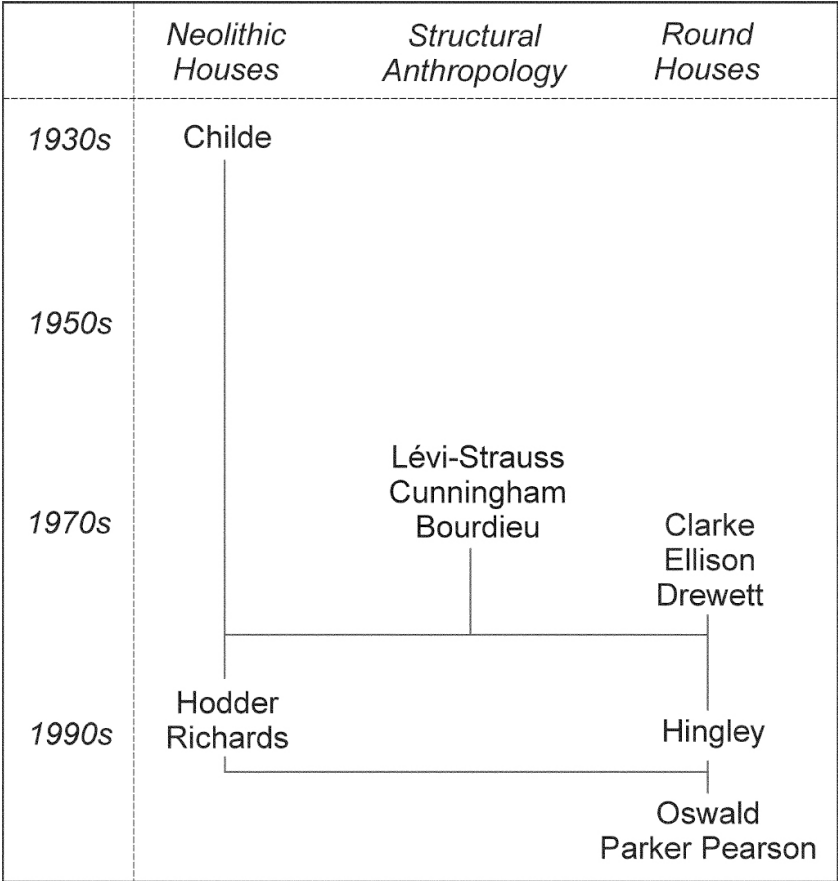


Fig. 2. Male/female opposition in the study of domestic space.

Nevertheless, these attitudes continue to pervade academic thought. Early work on roundhouse function stresses male/female opposition, with a particular emphasis on the subservient female (e.g. Clarke 1972; Drewett 1979; 1982; Ellison 1981).⁹ Similar mechanisms work in more recent attempts to engender Neolithic houses (e.g. Hodder 1984; Richards 1990). As a result, the cosmological model – heavily influenced both by these studies and by structural anthropology – retains these concepts (Fig. 2). Gender-based binary oppositions have become an accepted means of

identifying prehistoric cosmologies. Can we, however, still believe in the universality of male/female opposition? Hingley (1990) is somewhat hesitant about the topic and does accept that it is not a universal principle. Nevertheless, his attempt to engender the roundhouse by using structuralism to associate women with peripheral space and, amongst other things, the concepts of darkness, dirt, rawness, infertility, and death, can surely be rejected as a somewhat disturbing modern male view of prehistoric woman. Whilst Parker Pearson (1996) stops short of an explicit assertion regarding power and sex, the subordinate female is implied and is always associated with negative connotations (see also Parker Pearson and Richards 1994a, 45).¹⁰ Others, recognising the inherent problems regarding the social construction of gender, are more cautious (Fitzpatrick 1997, 77–8).

Can we assume that an imbalance of social power between men and women is universal? One might perceive this to be generally the case in the historical West, as a result of Classical attitudes towards women and the impact of Mediterranean civilisation on Western thought. However, pre-Classical attitudes are more difficult to ascertain. Both archaeological and textual evidence (e.g. Tacitus, *Agricola* 16) could imply some equality between the sexes in the Iron Age (Ehrenberg 1989), although the problems of accepting Roman comment as culturally unbiased are all too clear. As Hingley (1990) points out, some anthropological work on gender demonstrates male/female union rather than opposition (e.g. Harris 1980; Moore 1988, 13–24). In addition, some studies demonstrate a fairly relaxed attitude to the sexual division of labour in some modern societies (e.g. Denyer 1978, 92), with observations pointing to these divisions as more inherently involved with sex than status (Pope 2003). The relationship between sex, gender, and social power in the past is currently in need of sustained cross-disciplinary research, and prehistoric studies would benefit from searching out related work, particularly in the biological sciences.

When we discuss gender, it is often in terms of attitudes *towards* women (cf. Parker Pearson and Richards 1994a, 26), revealing a belief in woman as category rather than agent. It is, however, possible that – regardless of power structures – women were fairly active in creating their own use of space. Certainly, the link

between ordered space and gender is no more implicit than that between space and culture more generally (Tringham 1991). As a result, there are a number of problems with the use of binary oppositions regarding both gender and the social use of space (Allison 1999a, 11). We may merely be engendering artefacts and situations according to our own culturally-inherent, androcentric misconceptions. Hingley's (1990) account, for example, has been criticised for accepting women as universally domestic and of low status (Gilchrist 1999, 113). Biological sex is an obvious social division and one widely attested in the anthropological literature but again a more nuanced understanding is required which appreciates the relationship between meaning and context (*ibid.*). Rather than applying modern concepts, based around the nature/culture dualism, we should be using the archaeological record to provide us with an understanding of *prehistoric* rationality (Brück 1999a). What we require in prehistoric studies is a move away from modern concepts of sex and power to an understanding of prehistoric identity and social organisation.

Taphonomic issues are also pertinent when considering the archaeological application of structuralist models. A left/right division of space may be supported for the two structures considered by Fitzpatrick (1994). At Dunston Park, the depositional context of the majority of finds does support deposition during structure use (cf. Reynolds 1995); and at Longbridge Deverill, destruction by fire means that the assemblage is *perhaps* more likely to represent use activities. Fitzpatrick (1994; 1995, 68–9) also discusses other factors that may have caused patterning in artefact distribution, for example plough damage regarding feature depth, or the loss of organic material. Nevertheless, the incorporation of these two examples into the cosmological model remains problematic. These and other large Early Iron Age houses in Wessex such as Pimperne (Dorset), and Little Woodbury (Wiltshire) might be seen as constituting a 'regional type' and thus not representative of human action elsewhere in Britain. Similar conclusions have been reached by J.D. Hill (pers. comm.), who sees large Early Iron Age houses in Wessex as having a distinct set of abandonment traditions.

Not all studies that have followed Fitzpatrick (1994) have been as careful in their consideration of the formation processes affecting

the deposits under study, as for example in the case of Dun Vulcan (Parker Pearson and Sharples 1999).¹¹ Instead, some of our so-called ‘contextual’ studies apply what is known as the ‘Pompeii premise’, whereby artefacts are seen as indicating use activities, regardless of context or the processes by which they became incorporated within a deposit (Schiffer 1985). The fact remains that the majority of artefacts in the archaeological record have been removed from their primary use context. A whole body of literature in north America, mostly based on ethnoarchaeological study, has revealed that the processes involved in house abandonment often significantly alter household assemblages and that the deposits recovered may incorporate material that is wholly unrelated to structure use (cf. Stevenson 1982; Schiffer 1987; Brooks 1993; Lightfoot 1993; Rothschild *et al.* 1993; LaMotta and Schiffer 1999). Application of this work to the British evidence suggests that house abandonment in later prehistory was generally planned (Pope 2003), a finding in keeping with the high number of abandonment deposits discovered on structure floors (Brück 1999b). Without an understanding of formation processes, the use of terminal deposits for determining prehistoric use of space is at best unreliable.

The uncritical use of analogy and the narrative form

‘If we interpret the past by analogy to the present, we can never find out about forms of society and culture which do not exist today... what would be the point of repeating our knowledge of contemporary societies by tagging labels on to societies of the past?’ (Hodder 1982b, 14)

Only through the use of analogy can we use material culture in the present to interpret human action in the past. This is a statement with which all leading theoreticians of the later twentieth century would agree. Whilst some (e.g. Binford) have taken a fairly normative approach to this problem, others (e.g. Hodder) have actively sought to develop a methodology for the ‘proper use of analogy’. The result is a twofold definition: *relational analogy* seeks some form of link between similarities in the source (present) and subject (past) to demonstrate relevance (Ascher 1961; Hodder 1982b; Wylie 1985). *Formal analogy*, on the other hand, assumes

that if the source and subject have *some* common properties, others can be expected; it fails to consider that the observed similarities may be fortuitous (Wylie 1985; Hodder 1982b). Formal analogies have thus been variously described as ‘weak’, ‘unsystematic’ and ‘indiscriminate’ (*ibid.*). For example, similarities between the material culture of Late Neolithic Wessex and modern Madagascar may not be taken as an indicator of shared ideologies (*contra* Parker Pearson and Ramilisonina 1998). It is formal analogy which runs through the arguments of the cosmological model:

‘We should bear in mind the extent to which vernacular architecture all over the world incorporates cosmological referents... Perhaps, as in so many other places, the house acted as a microcosm of the universe, with the passing of time measured around the walls of the house’ (Parker Pearson 1996, 119)

‘the ethnographic record is peppered with societies which use cosmological referents to structure their settlements... In societies where the individual dwelling is structured according to cosmological referents, doorway orientation is likewise regularly homogenised. This may suggest models for the Iron Age roundhouse’ (Oswald 1997, 93)

The roundhouse has adopted its sunwise traditions by analogy with the *hogan* of the Navajo and Hopi native Americans and the *yurt* of the Turkomen, Uzbeks, and Kirghiz of Afghanistan; the Russian Kazaks; and a number of Mongolian tribes (Parker Pearson 1996; Oswald 1997). The source and subject of these analogies are thousands of miles and years apart. For the source communities, belief systems involve the practice of animism which is used to explain natural phenomena and the dwelling readily becomes a symbolic model of the greater universe. In the house, a sunwise path is followed; space is divided according to biological sex and status; and the transition from exterior to interior is symbolically important. Bound up with an oral history of the community, house layout is passed down through the generations as cultural tradition (Oliver 1987, 158– 60). Reviews of the ethnographic literature reveal, however, that such overtly ritual segregation of the house is not so frequently encountered in traditional African roundhouses

(Pope 2003), whilst despite later comments, Oswald (1991, 59) admits that relatively few societies have cosmological symbolism based on the individual dwelling. It might thus be suggested that this deliberate, ritual segregation of space¹² was developed by traditionally nomadic communities as a way of creating ontological security for a group which has only short-term ties with landscape.

Using anthropology to interpret archaeological data is naturally fraught with difficulties because of the inherently political agenda of that discipline (Kuper 1988; Gilchrist 1999, 53). Interpretation is dependent both on the political mood of the moment and the worldview of the researcher. Anthropology also relies heavily on use of the narrative form to generalise human action, to the extent that, 'Even the Nuer are not like *The Nuer*' (Kuper 1988, 201). In addition, just as there are obvious methodological problems with the 'cherry-picking' of archaeological sites (Cunliffe 1999), so theoretical problems exist regarding the selection of ethnographic analogy and the interpretation of case studies.¹³ We know that human action is structured by cosmologies and anthropology does reveal the overtly symbolic role of houses in some societies. Consequently, we must consider these ideas in our study of prehistoric houses. However if, following Hill (1989), it is accepted that modern, Western concepts – such as 'efficiency' – are not valid in the past (cf. Parker Pearson 1996, 117; Oswald 1997, 87), it follows that back-projection of modern, ethnographic structures – e.g. ritual symbolism – is also poor methodology. The cosmological model's acceptance of ethnographic structures reveals a subconscious, lingering readiness for us to assume that prehistory, as pre-'us', has a natural parallel in modern 'primitive' societies.

In a similar vein, the cosmological model also incorporates modern 'traditional' analogy. For this we must turn to the interpretation of the houses at Skara Brae, as many of the ideas contained in the model can be traced back to Childe (1931). On analogy with recent Hebridean blackhouses, Childe suggested that the difference in size of beds on the right and left sides of the house might reflect the separate beds of men and women (cf. Clarke and Sharples 1985).¹⁴ It should go without saying that because recent Hebrideans chose to sleep in separate beds, this is not necessarily the correct interpretation for the evidence from Neolithic Orkney.¹⁵

Again, use of analogy at Skara Brae – this time with recent, traditional Orcadian culture – sees Neolithic women effectively confined to the house (Parker Pearson and Richards 1994b, 44–5). Finally, Clarke and Sharples' (1985) extension of the blackhouse analogy, this time regarding status around the fire at Skara Brae, was uncritically accepted for the Iron Age (Parker Pearson 1999; Parker Pearson and Sharples 1999). What is interesting is that – despite the rejection of modern Western functionalist structures – there is a readiness to accept cosmological structures from recent, traditional Scottish culture, as well as modern non-Western communities, as somehow prescriptive of prehistoric rationality.

Turning to ethnography enables us to think outside our own experiences in interpreting the past. Application of analogy-based cosmological structures remains problematic, however, especially when we assume – rather than demonstrate – universality. If anything, anthropology reveals that cosmologies are culture-specific. One solution is that, as archaeologists, we employ ethnography as a 'signifier of complexity' rather than a 'prescriber of behaviour' (Allison 1999a, 3). This, however, denies the fact that analogy is an invaluable part of the archaeological process. Nevertheless, we cannot understand prehistoric cosmologies via formal analogy with the present, nor can we simply dismiss the problems of the 'middle-range' via its uncritical use. It is the *critical* application of analogy that should be central to archaeological interpretation (cf. Wylie 1985, 74; Hodder 1982b, 92; 210; 1999, 46). For archaeologists, the emphasis should be on the importance of context (Hodder 1999, 47), as we develop an 'argument of relevance' about the relationship between material culture and social structures (Hodder 1986, 103). It is crucial that our ideas regarding prehistoric cosmologies are thoroughly grounded in the archaeological data, as in the work of Hill (1995) and Brück (1999b).

Just as the cosmological model encompasses an uncritical use of analogy, so too there are problems with its use of the narrative form, particularly in its developed stage. According to Lyotard (1979), post-modernism rejects the grand narrative in favour of *petit récits*, 'little narratives' which attempt an understanding of human action at community or group level. We can see this in Iron Age

studies with the deconstruction of ‘Celtic society’ (Hill 1989; 1996). We must be aware that with the cosmological model, anthropology is being used to justify our new narratives, just as textual evidence once supported ‘Celtic society’. We are making the same mistakes again, only in a different form: Iron Age studies is still over-reliant on formal analogy, it is simply the *source* of the analogues that has changed. Further, the cosmological model is extending the narrative to national level again: the east/south-east polarisation of roundhouse orientation is apparently repeated throughout the Iron Age, with only rare local variation (Oswald 1997, 89), whilst sunwise movement has been extended across the whole of Iron Age Britain using evidence from just two wheelhouses, dating to the very end of the period (Parker Pearson 1999, 60). National-level narrative has to be grounded in the data and this has not yet been achieved in Iron Age studies.

The following quotes are reproduced so that the reader can note the development of language use and the progression towards grand narrative in the central texts of the cosmological argument. Emphasis is that of the current author.

‘[The] left/right distinction *almost certainly* incorporate[s] cosmological referents... [and] it *may* be orientation which helped define [it]’ (Fitzpatrick 1994, 69)

‘*Perhaps*, as in so many other places, the house acted as a microcosm of the universe... The entrance to the east *might* be related to the sunrise’ (Parker Pearson 1996, 119)

‘It is *tempting*, but almost certainly too simplistic, to *infer* a universal sun-cult’ (Oswald 1997, 94)

‘the organizing principles of the east–west axis and the sunwise path were adopted across Britain from southeast England to northwest Scotland in the centuries after c. 900 BC’ (Parker Pearson 1999, 60)

Within just five years the cosmological model had moved from tentative suggestion to suggestive fact. By 1999, the passage of the sun *was* an important organising principle, with sunwise movement ‘embedded in the routines of daily life within the house’ (Parker

Pearson 1999, 49–50). At the end of the twentieth century, the British Iron Age *had* an enduring set of sun-based traditions which had been adopted *across* Britain for the best part of a millennium (*ibid.*, 43; 60). We even find that where houses lack the necessary evidence from floor deposits, we can still surmise sunwise movement by extrapolation from elsewhere (*ibid.*, 51). This pattern of logic is sadly all too familiar in prehistoric studies. Rather than test ideas in the data, the main texts of the cosmological model continued to cite the work of one another as evidence for sun-based traditions in the Iron Age (cf. Parker Pearson 1999, 49; Giles and Parker Pearson 1999, 219). The published argument remains based on evidence from just a handful of houses, relying heavily on formal analogy and the narrative form. Where the model might hold currency, however, is in Oswald's (1991) dissertation on roundhouse orientation. This work, with its evidence for houses facing equinoctial and midwinter sunrise, really does underpin the cosmological model.

Current interpretations of roundhouse orientation: an appraisal

‘a strong bi-modal tendency... is repeated with little variation throughout the Iron Age, with only rare local differences’
(Oswald 1997, 89)

The topic of roundhouse orientation was first discussed by Graeme Guilbert following his excavations at Moel y Gaer (Flintshire), where the direction of doorways is fairly standardised towards east and south-east. Guilbert (1975, 205) suggested that this might represent environmental concerns such as the provision of shelter and light, but also introduced the idea of ‘mystic’ concerns involving the rising sun. Whilst some authors accepted and worked to demonstrate the environmental explanation (e.g. Lambrick 1978; Drewett 1982; Hingley and Miles 1984), others picked up on the idea of ‘ritual’ concerns. For example, Wait (1985) – remarking on the standardised eastern orientation of ‘Celtic’ shrines – briefly suggested that domestic structures, similarly oriented, may have wished to benefit from this sacred direction (*ibid.*, 177). At the same time, attempts to integrate work on the social use of space within

prehistoric studies saw the orientation of roundhouses cited as a spatial principle (Boast and Evans 1986). It is also here – again following Guilbert’s (1982) work at Moel y Gaer and the identification of the design principle of axial symmetry¹⁶ – that we first encounter the idea of the east–west axis. These earlier works prepared the ground for more in-depth studies of orientation by Hill (1988) and Oswald (1991).

Oswald’s dataset comprised 34 structures from Moel y Gaer, 52 from north-east England, 110 from seven sites in south-east and central southern England, and 95 from the valleys of the upper Thames, Nene and Great Ouse (Oswald 1991). Almost 70% of his data is from south-east and central southern England. The first problem is that his conclusions may not be particularly representative of sites outside this core area. Oswald himself found that the trend towards east/south-east orientation was not supported in his review of literature from other parts of Britain, in particular north-west Wales, south-west England, and Atlantic Scotland, nor was it evident in French roundhouses (1991, 21). In addition, Oswald’s (1997) oft-reproduced figure 10.4 – upon which the cosmological model is really founded – deliberately excludes houses that do *not* reveal an east/south-east orientation, such as those in north-west Wales (Fig. 3). Sites that fail to conform, such as Glastonbury and Danebury, are considered separately in a section entitled ‘exceptions’. The second problem with Oswald’s research, then, is the selective inclusion of sites.

A third problem is the emphasis on east/south-east *polarisation*. This phenomenon is strongly represented, in Oswald’s dataset, at Moel y Gaer and in the valley landscapes of south-east England. However, it has been argued that the standardisation of orientation at these sites may actually be related to their seasonal use (Pope 2003). Whilst a general east to south-east trend is apparent at other sites in the dataset, *polarisation* is not so strongly represented when these apparently special sites are removed. As these sites account for 46% of Oswald’s dataset, they effectively mask other patterning, distorting the data towards polarisation. A similar illusion of polarisation exists in Hill’s (1996) analysis of 234 circular structures from 37 sites in southern England. These buildings were only analysed according to the eight major points of the compass, thus

structures facing between and beyond east and south-east could not be discerned. The evidence might then suggest that east/south-east polarisation is an artefact of analysis. It is this polarisation – around the directions of equinoctial and midwinter sunrise – which leads Oswald (1997) to the discussion of sun worship in the British Iron Age. The uncritical repetition of Oswald's conclusions, without due consideration of his dataset, has led to the propagation of a factoid: that sun-based cosmologies influenced use of space in the Iron Age house.

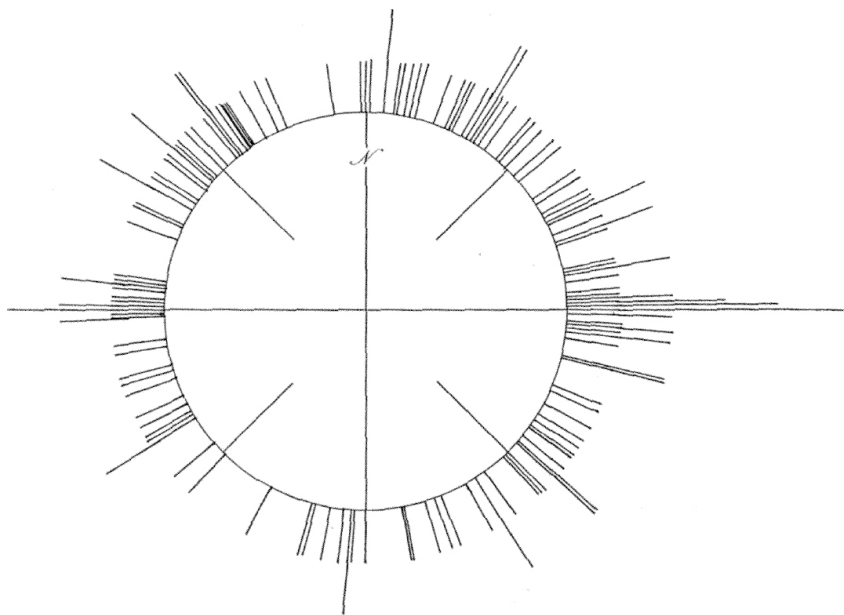


Fig. 3. Orientation of 161 circular structures in north-west Wales (after Oswald 1991).

What is particularly misleading is that Oswald's figure 10.4 is apparently seen as being representative of structure orientation *across* Iron Age Britain (cf. Parker Pearson 1999) and further, that the vast majority of structures are thought to be oriented towards east and south-east. Both of these points were brought to the fore at the Scottish Archaeological Forum's *Circular Arguments* conference in Glasgow in 1999, when Mike Parker Pearson stated that 90% of structures across Britain faced east and south-east in the first millennium BC. A chronological breakdown of the orientation data

for north and central Britain (excluding complex Atlantic architecture) revealed that the greatest standardisation of orientation occurred during the Late Bronze Age/Early Iron Age transition and that even then, it was only 52% of structures that faced east and south-east (Pope 2003). Another example of the exaggeration of statistics in association with the cosmological model can be found in the Dun Vulan report, where it is stated that: 'Whilst many brochs... [face east], half of them face west' (Parker Pearson and Sharples 1999, 17); in Parker Pearson (1999, 45), it is 'more than half '. In fact, the paper to which the authors refer reveals that just 32% of 90 brochs face west¹⁷ (Parker Pearson *et al.* 1996, fig. 3). This tendency for getting caught up in the narrative of the model, to the extent that the data become malleable and their context forgotten, is at best concerning.

The cosmological model can also be criticised for its active marginalisation of the environment, a point which again hinges on Oswald's (1991) conclusions. It is difficult to understand exactly why environmental factors are so readily dismissed by Oswald when, if anything, his work clearly demonstrates their importance. His argument is that because variation in wind direction is greater than that of doorway orientation, environmental factors had no impact. Only if a *number* of directions are undesirable, is a specific orientation – as seen in the Iron Age – likely to be adopted, for which he cites the example of the Tareumit of Alaska whose houses are oriented in a *general* direction away from the wind (1991, 48). Whilst discussing both wind and light in his study, Oswald only draws on the former in his conclusions. However if *both* have a role in influencing orientation, this might lead to an increasingly standardised tradition. In addition, it is surely not coincidental that we should witness a shift from a southerly direction – which optimises light – in the Bronze Age, towards south-east at the start of the Iron Age, suggesting an increased concern with shelter during a period of significant climatic downturn.

This move against environmental concerns is a result of recent theoretical debate. Following Hill (1995a), several proponents of the cosmological model have argued that Iron Age studies have suffered from the back-projection of our own 'common sense' values and modern principles (e.g. Oswald 1997, 87; Parker Pearson 1999,

60; Parker Pearson and Sharples 1999, 16). This has been extended to the discussion of past environmental concerns, with such work being denounced as 'functionalist'. Countering this argument is the work of Hodder, which suggests that human responses to certain natural laws may have remained relatively consistent (1999, 46), as the basic characteristics of water, wind, earth, and stone are more or less constant (Hodder 1982b, 92; 210). In the same way, human beings have always needed to eat and drink, to sleep and to stay relatively warm and dry. Put bluntly, the human body – today and in prehistory – risks exposure up a mountain and cannot see in the dark. Naturally, there is variation in response to such factors, both across space and time, as different people respond in different ways and adapt to different environments, but the basic principles endure. It can thus be argued that certain environmental factors, such as the provision of shelter and light, may be fairly universal concerns, transcending modern notions of efficiency and functionalism, with the relationship between human and environment again worthy of study.

The ethnographic literature suggests that house orientation may be more complex than a purely ritual *or* purely functional interpretation would assume. Orientation for the Kipsigis of south-west Kenya, for example, is a marriage of both ritual *and* functional concerns. The Kipsigis doorway generally faces south but there are at least six different factors involved in choosing orientation. The house might face downhill for drainage, or face the river if on a plain, or face towards the old home after migration; the entrance should be against the weather, and against the rising and setting sun, the house must also have a west and an east side for ideological reasons (Peristiany 1939, 158; Orchardson and Matson 1961, 83–4; Oliver 1987, 64). Interestingly, Oswald himself criticises both Hill and Parker Pearson for paying little heed to environmental explanations, suggesting instead that symbolic and environmental concerns can exist side by side (1991, 6). Our example of the Kipsigis suggests that environmental concerns are *a part of* cosmologies. Just as traditional functionalist perspectives neglected the impact of ritual behaviour in archaeology, accepting ritual should not be at the expense of functionalism (Hodder 1986, 54). The two are interdependent. Rejecting *either* is bad practice, we

must be open to the possibility of *both* (Brück 1999a).

The author's own work on published circular structures in north and central Britain does not support Oswald's (1997) results. Orientation could be determined in 72% of 1178 prehistoric and Roman period roundhouses. Two sites – Garton–Wetwang Slack and Moel y Gaer – were removed from analysis: both had high numbers of structures with standardised orientation and thus the potential to distort real patterning.¹⁸ This left 690 structures from 253 sites, of which 63% date to the Iron Age. The majority of structures (63%) are oriented between north-east and south-east with a clear preference for east, east-south-east and south-east (Fig. 4). These results are at odds with Oswald's work which stresses *polarisation* around east and south-east. There is also more variation than Oswald's work suggests, with one in two structures facing in a direction other than east through south-east. The cosmological model is ultimately based on Oswald's suggestion that the east/south-east polarisation of orientation is evidence for Iron Age cosmologies based on sunrise. For communities in north and central Britain if not elsewhere, the idea of sun-based belief systems as centred on the roundhouse and existing *across* Britain can now be called into question.

It is argued that Iron Age sun-worshippers built their houses to face sunrise. Whilst one in three houses are oriented around midwinter sunrise, only slightly more than one in six are oriented around midsummer sunrise.¹⁹ If we accept that construction was generally undertaken during the summer months – which seems likely taking into account resource availability, weather conditions and timing within the agricultural cycle (Pope 2003) – how do we account for this discrepancy? Why this focus on east and south-east? According to the meteorological data collected by Oswald (1991),²⁰ the dominant wind direction in Britain is west-south-west (Fig. 5). Assuming that wind directions have remained constant, this means that shelter can best be obtained by orienting between north and south-east, which accords well with the archaeological evidence. If we also factor in a general understanding of light, as best supplied by the southern sky, we find that the shelter/light optimum lies between east and south-east (Fig. 6). Whilst this reveals optimum orientation for the majority of the year – autumn to spring – the

optimum stretches to between south-east and north-east in the summer months, as the sun extends into the northern sky (cf. Pope 2003). The slight trend towards north and north-east in [Figure 4](#) can perhaps then be seen as an indicator of structures occupied in the summer months. Whilst this is a very general understanding – the effects of local climate/topography would have had significant impact – it is suggested that roundhouse entrances tend to focus around east and south-east to maximise the qualities of light (including sunlight) and shelter.

Oswald's (1991) identification of a general shift from southerly orientation in the Bronze Age to a more easterly direction in the Iron Age – a trend recently confirmed by Brück (1999b) and Pope (2003) – has been used to argue for the beginnings of a new ritual order at around 900 BC, lasting until the end of the Iron Age (Parker Pearson 1999, 60). We see this claim at its boldest with the suggestion that east-facing structures simply do not date before 900 BC in Britain (Marshall *et al.* 1999, 39; *contra* Parker Pearson 1996, 119), yet the author's own research revealed that of 82 Bronze Age structures where orientation was known, one in four were east-facing (Pope 2003). More generally, Pope's analysis reveals that in the later third millennium BC structure orientation in north and central Britain was rather unfocussed, but that during the second millennium BC structures became increasingly oriented on the southern sky. Orientation shifts towards the *south-east* during the Late Bronze Age and Earlier Iron Age and there is a further shift towards the east from the end of the Earlier Iron Age, a strong trend which continues until the end of the Roman Iron Age. In the Bronze Age, the primary concern would seem to be with the provision of light (Drewett 1982) and, as climate worsens in the early first millennium BC, we see a swing towards the provision of shelter, alongside light (Pope 2003).

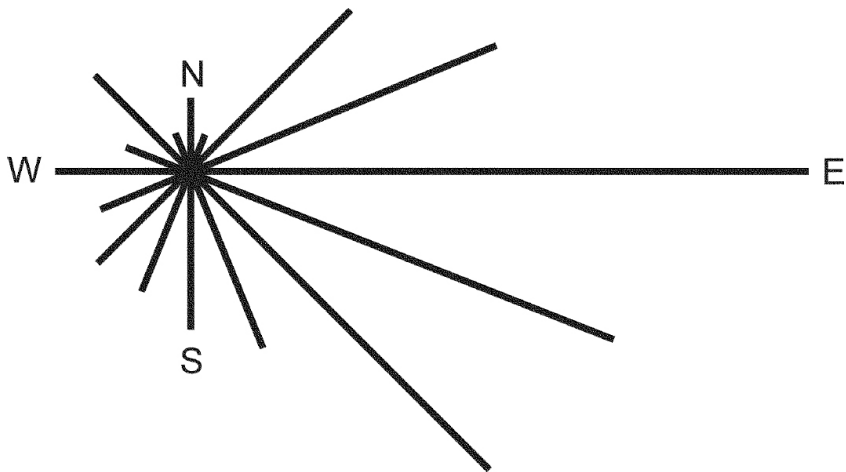


Fig. 4. Orientation of 690 circular structures from 253 sites in north and central Britain.

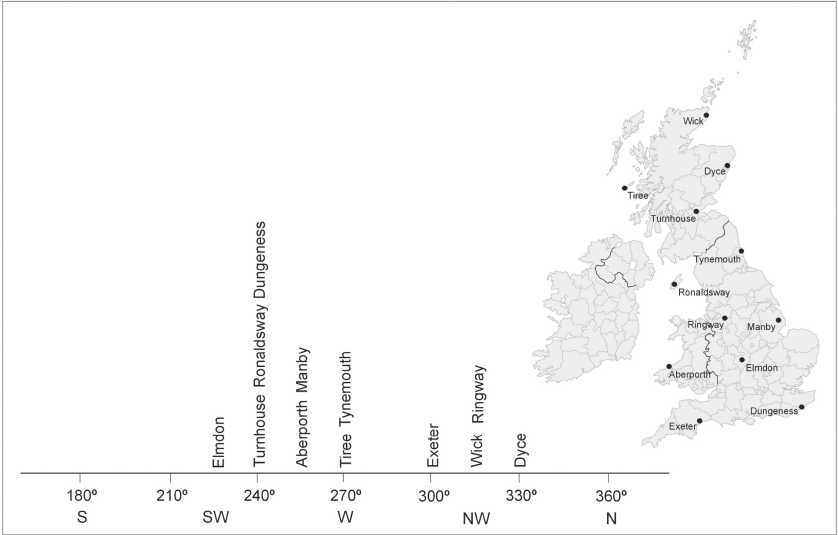


Fig. 5. Dominant wind directions in Britain.

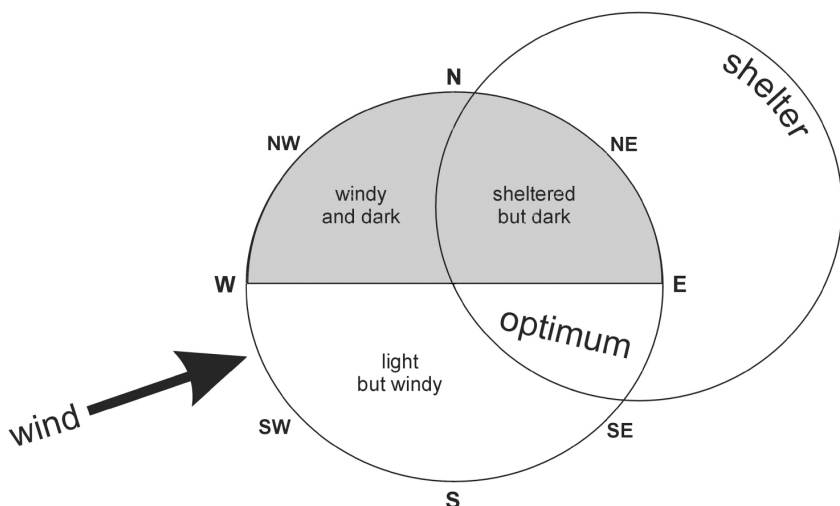


Fig. 6. The general shelter/light optimum for structure orientation.

Just as we see a trend in structure orientation from south to east through time, a similar trend exists regarding regionality. Highland Scotland sees predominantly south-eastern orientation, whilst east-south-east is favoured in southern Scotland and northern England, and east is the direction of choice in central Britain (Pope 2003). In considering the provision of shelter and light, this variation in orientation might be explained according to differences in latitude. The further north we are, the fewer daylight hours we have available in winter: for example, there are less than six hours of daylight available on the Orkneys during midwinter (Richards 1990, 121). Thus in northern Britain, a more southerly orientation may reveal a greater concern with maximising daylight. In the south of Britain, however, longer winter days mean that traditions of orientation are, to some extent, less fettered by concerns regarding the provision of light, which might lead to an increasingly eastern orientation. This continues to maximise shelter and light but does so for a greater proportion of the year. Our understanding of the orientation data will continue to improve as more work is done on the seasonal use of structures (Pope 2003). As well as variation in structure orientation from north to south, limited analysis provides some indication for variation from east to west²¹ which reveals the need for more localised studies of trends in orientation.

Taking all of the above into consideration, the argument for Iron

Age sun-worship, as centred on the roundhouse, is difficult to sustain. Wait (1985) suggests that, in general, houses do not face due east, like shrines, until the Roman Iron Age. However, in north and central Britain the shift towards east in fact occurs at around 400 BC and it is perhaps here that theories of house-centred sun-worship currently hold most water, although again issues relating to seasonality must be explored (Pope 2003). At present, the concept of an east–west organising principle is perhaps most confidently witnessed *beyond* the house. The east–west orientation of apparently communal sites would seem to be a recurrent theme during many periods, including, for example, Earlier Neolithic burial monuments (Ashbee 1970; Burl 1981); Late Bronze Age ringworks (Oswald 1991, 67; Needham this volume); Iron Age hilltop enclosures (Hill 1996);²² Late Iron Age brochs (Parker Pearson *et al.* 1996); Late Iron Age shrines and Roman temples (Wait 1985); Irish ringworks (Edwards 1990, 21);²³ and Christian churches. It is suggested that this may be a result of long-term ritual or phenomenological concerns, originally associated with sunrise and sunset. Certainly, cosmologies like these are visible in the wealth of data that forms the archaeological record. Nevertheless, we need a much more subtle approach than structuralism if we are to attempt to understand prehistoric rationality.

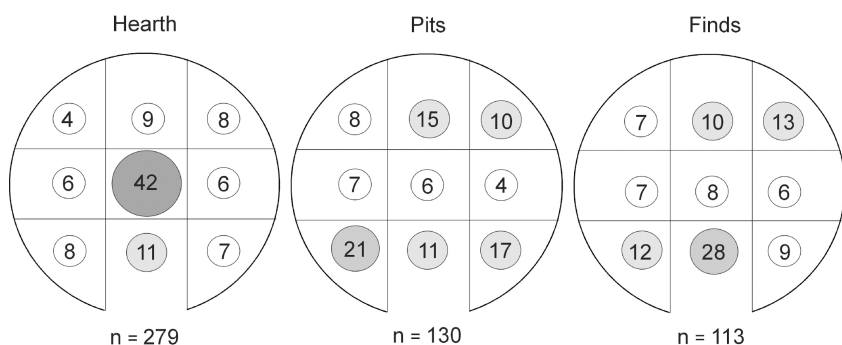


Fig. 7. Spatial patterning of hearths, pits and finds (%).

Use of domestic space in north and central Britain

‘full knowledge of the inner arrangement of these houses will only be worked out through the cumulative use of partial information from many sites’ (Bersu 1977, 58)

The second part of this paper will attempt to develop a more informed understanding of the later prehistoric use of domestic space through spatial and structural analysis of data from 570 houses in north and central Britain, along with a consideration of the use of light as observed in experimental reconstructions. This can only provide us with a very general understanding, not least because of the chronological and geographical span of the data.²⁴ It was decided, however, that for factors relating to use of space, the number of structures with appropriate data was too low to warrant discussion via chronological or geographical subdivision. The results presented here must therefore be tested in future local and regional studies which incorporate more evidence from recent excavations and/or unpublished sites. Much of the analysis is necessarily based on the whole dataset, but, where appropriate, an attempt is made to focus in on the Earlier Iron Age situation.

Activity areas and the idea of ‘front’ and ‘back’ regions

Where hearth position could be ascertained (279 structures), a high proportion were found to be central, with some tendency towards a position front of centre (Fig. 7a). In African traditional architecture the hearth is often non-central, more often positioned according to the area designated for cooking. In prehistoric Britain, the typical central position of the hearth may reveal the desire, in a temperate climate, for an even distribution of heat and light within the structure. This central position also helps reduce the risk of accidental fire, as it lies directly beneath the apex of the roof. In prehistoric longhouses in Denmark, where the hearth is positioned towards the gable end, evidence for accidental destruction by fire is substantially greater than in Britain (L. Webley pers. comm.). The hearth was no doubt a major area of activity because of its heating and lighting qualities. At the well-preserved structure at South Shields (Tyne and Wear), a lack of plant remains around the hearth led Van der Veen (2001) to infer that activities had taken place there which prevented their accumulation. At the reconstructed Greenbogs House at Oyne (Aberdeenshire), the hearth was an area where moveable seating was used. The first main activity area then is based around the hearth, often at the centre of the structure.

Where pit position was known (130 structures), pits were most

commonly found at the front of the structure, but with some preference also for a back right position (Fig. 7b). Pits are often – in nine out of ten cases – not associated with the hearth, suggesting that the use of each is, on the whole, mutually exclusive.²⁵ Where finds position was known (113 structures), distribution reveals a strong preference for the entrance area, but again with an additional tendency towards back right (Fig. 7c). It must however be remembered that finds position may have as much to do with deposition at the time of abandonment as with structure use. Where twin post settings indicative of founded looms are found, they are all positioned towards the front of the structure.²⁶ At the well-preserved Tormore 10/1 on Arran, more post hole-producing activity was found in the area immediately adjacent to the doorway, along with evidence for crop and wood processing activities and a concentration of lithics, whilst evidence for the storage of wood and grain was found towards the back of the structure (Barber 1997, 11). At South Shields, a working surface, pits and grain processing debris were found towards the front of the structure, whilst bedding material was found towards the back (Hodgson *et al.* 2001). Further evidence for sleeping at the rear of the structure is provided by chordal stone beds at a number Roman Iron Age structures, particularly in Northumberland and Gwynedd. The data suggest that a second main activity area can be found towards the front of the structure.

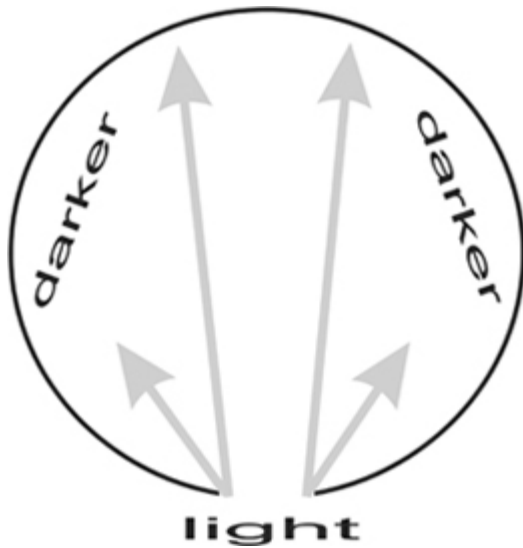


Fig. 8. How light falls in a circular structure.

Figure 8 shows how the author understands light to fall in a typical roundhouse, from observations in reconstructed circular structures.²⁷ In post-built structures, a gap at the top of the wall – protected by the eaves – provides some light in the early morning, before the door is open. The door is the main light source during the day;²⁸ the best light is towards the front of the structure but extends into the backspace.²⁹ The darkest areas are to the sides of the structure. Sunlight shifts from left to right during the morning and disappears before noon. As day progresses, light begins to withdraw from the periphery and the back of the structure leaving good light only in the frontspace, until by late afternoon or evening, the central fire has become the focus of activity. Lamps, utilising animal fat or butter as fuel, might provide additional pockets of light. In winter there is a greater emphasis on the central fire as the door is increasingly kept shut against the cold. At the Greenbogs House, a southwest facing door 1 m wide – a third narrower than the prehistoric average – provided ample light in the morning, even when just half open. At the first Conderton House it was possible to use a loom in the eastern quadrant of the north-facing structure and even to weave non-patterned cloth with only the light from the central fire (Reynolds 2005, 92). Our eyes do adjust to the light available and in time one becomes able to work in reasonably low

light levels, relying more on a sense of touch and the repetitive actions of the hands (H. Murray pers. comm.).

Our general understanding of the use of frontspace is that it involves activities such as food preparation and craft production. Brück (1999b) found that the vast majority of Middle Bronze Age houses in southern England had their hearth at the front of the structure, which was also the location of finds at one in three houses. Similarly, recent work on Iron Age longhouses in Denmark and the Netherlands reveals a front/back division about the hearth, with evidence for domestic activities concentrated towards the front of the Dutch structures (Gerritsen 2003; Webley 2003; 2007). Analysing the spatial location of artefact types in 37 apparently accidentally burnt-down houses in Jutland, Webley (2007) demonstrates that the *back* of the house is reserved for the storage, preparation and consumption of food in Denmark; thus differing from the ordering of space currently identified in Britain and the Netherlands (Brück 1999b; Pope 2003; Gerritsen 2003). A front/back division of space is also common in the ethnographic literature, for example in the traditional houses of the Dorze (western Ethiopia), Kipsigis (southwest Kenya), and Galla (southern Ethiopia), with the front especially involved in cooking and social activities (Gebremedhin 1971; Andersen 1978, 95; 157). In their re-analysis of finds from Glastonbury, Woodward and Hughes (this volume) found artefacts involved in textile production towards the front of the structure, as well as display metalwork. This, however, may again tell us more about deposition on abandonment than structure use (Pope 2003).

Whilst the frontspace is a focus for activity, the backspace is interpreted as an area for sleeping and storage. Similar use of backspace has been demonstrated in the ethnographic literature (Gebremedhin 1971; Andersen 1978, 95; 157). As the front has the advantages of light and ease of access, the back of the structure has the potential for privacy, with the public/private dichotomy accepted for the Dutch evidence (Gerritsen 2003). Relevant here is Plimpton and Hassan's (1987) application of Hillier and Hanson's (1984) concept of spatial 'depth'. Their analysis of nine houses at Sirsina on the West Nile Delta found a front/back patterning, with living rooms and guest rooms as the most 'shallow' rooms – those

found closest to the entrance – and storage activities, kitchens, animal stalls and bathrooms as the ‘deepest’ rooms – those furthest from the entrance. Bedrooms were found to be the most adaptable rooms, being found in both the front and back of structures. Interestingly, guests might also be placed upstairs, in the deepest part of the house. Plimpton and Hassan’s interpretation involved a distinction between cleanliness and order towards the front of the structure and messiness or noise towards the back. At Glastonbury, human remains, querns, weaving combs and beads were found in the backspace (Woodward and Hughes this volume). Pope (2003) also identified deposition of artefacts in this area, particularly quernstones, on abandonment.

Peripheral space and the idea of the active periphery

It is commonly suggested that the darker peripheral space in prehistoric structures was used for sleeping and for storing equipment, food, and firewood as well as stalling domesticated animals (Musson 1970; Harding 1974; Chadwick Hawkes 1994). In Middle Bronze Age structures in southern England, pits were predominantly located in the periphery (Brück 1999b). A centre/periphery division of space is common in traditional African circular architecture, such as with the Pokomo and the Kamba of eastern Kenya and the baKosi woman’s house of western Cameroon (Andersen 1978; Levin 1971). In these examples, furniture is arranged around the periphery and the centre is left more open. However this division of space is not strictly related to hearth position and appears to be more common in smaller structures, perhaps revealing it to be a particularly economical use of space. Hingley (1990) argued that double-ring structures had two major functional areas: the central space, with the hearth as the focus of communal domestic activity; and the periphery, for sleeping and storage. However the structuralist emphasis on the active centre and inert periphery does not accord well with wear patterns in the archaeological record; these suggest that in many double-ring structures the periphery was a dynamic area.

Pope (2003) saw a particular increase in the provision of peripheral space at around 800 BC, which declined again in the Earlier Iron Age. The concern with providing peripheral space was

linked to shifting subsistence strategies, in particular pastoralist activity. Using a dataset of 43 structures, Strang (1991) found that the vast majority of structures had a 1–2 m wide periphery. Using a larger dataset (309 structures), we find that the average periphery is towards the top end of this range at 1.7 m wide. In triple-ring structures, the width of the inner zone³⁰ is very similar to that of the periphery, at 1.8 m. Contrary to what might be expected, the periphery is, on average, larger than the central area. In a 10 m structure built to the structural optimum (see below) the central area represents 38% of the total space; the periphery 62%. When compared with the figures from the current dataset (Table 2), we see a general respect for the structural norm in prehistoric architecture, with peripheral space representing 61% of the centre and periphery combined. Rather than seeing the periphery as secondary in both spatial and social terms, we might begin to think of it as of equal and perhaps even greater importance than the centre. At Greaves Ash (Northumberland), for example, it was observed that more care had been taken in paving the periphery of the structure than the centre (Tate 1861).

<i>Centre</i>	<i>Periphery</i>	<i>Inner Zone</i>
31 sq. m	48 sq. m	41 sq. m

Table 2. Mean area of annular spaces (sq. m) in prehistoric circular structures.

In structural terms, the internal post ring of a doublinging structure should be positioned so as to distribute the weight of the roof evenly between itself and the outer wall. The post ring is thus ideally positioned at the point where roof area is halved: a ratio of 1:0.707 (Hill 1984). So in a 10 m diameter structure, the diameter of the post ring is c. 7 m. Work by Reid (1989) suggested that the use of space was, however, potentially more important in roundhouse design than structural principles. Certainly, in Hill’s (1984) dataset of 43 structures – most of them from the Tyne–Forth province – the results appeared to suggest a standardisation in the provision of peripheral space, with more created in smaller structures and less in larger structures. Reid (1989) plotted the dimensions of 22 double-ring roundhouses – most of them ring-ditch structures – from the Tyne–Forth region and found that the

majority had their outer walls and inner rings positioned further apart than the structural optimum. Hill's ratio was further tested against a dataset of 270 double-ring structures from across northern and central Britain (Fig. 9). Using a line of best fit we find the actual ratio at 1:0.615. The trend is for the post ring to be positioned further away from the wall – the ring beam slightly higher than the structural optimum – suggesting that the provision of peripheral space did influence structure design (Fig. 10a).

Controlling periphery size in double-ring structures may reveal use of the area for an activity requiring a set width, such as radial beds or animal stalls. In triple-ring structures, the periphery tends to respect the structural optimum; however the central space was generally made smaller to increase the size of the inner zone (Fig. 10b). This might accord well with evidence from High Knowes A (Northumberland) and Braidwood (Midlothian) where the inner zone, as well as the periphery, revealed activities associated with the formation of a ring ditch (Jobey and Tait 1966; Stevenson 1948–9). So, whilst there was a *general* respect for the structural optimum, spatial concerns were also considered in structure design. There is, however, another way to explain the pattern: perhaps house design was more concerned with roof pitch. By increasing the angle of the roof beyond the accepted 45° norm, more weight is provided towards the top of the structure. This naturally affects the ideal position of the ring beam, meaning that it must move inwards (*contra* Hill 1984, 81). Roof pitch brings in a number of other factors, including wall height, functionality, and aesthetics, matters that cannot be discussed here (see Pope 2003). It might be argued that increasing roof pitch was a way of increasing headroom in the periphery, but a 5° increase in roof pitch extends the area of headroom by only 0.10 m on the ground (*ibid.*). Such a move does, however, increase the amount of space given over to an upper floor. Whilst the latter concern remains a distinct possibility, there is additional evidence for the importance of peripheral space.

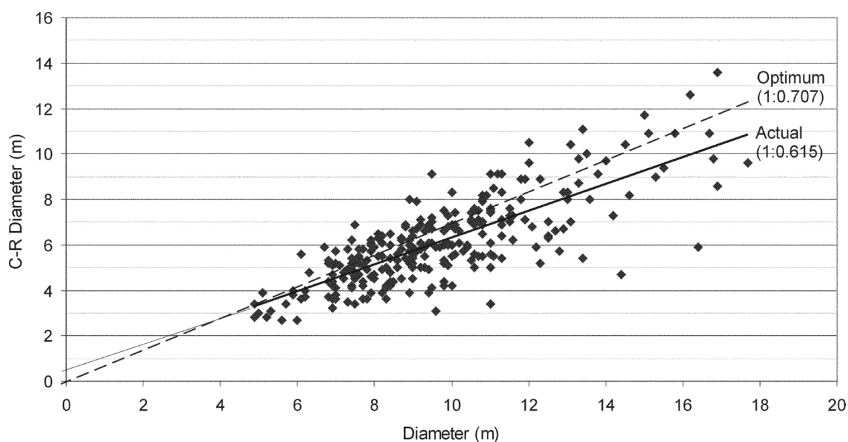
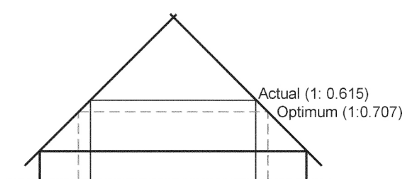
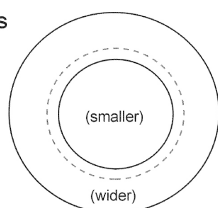


Fig. 9. Hill's (1984) 'optimum ratio' tested against 270 double-ring structures.

Double-Rings



Triple-Rings

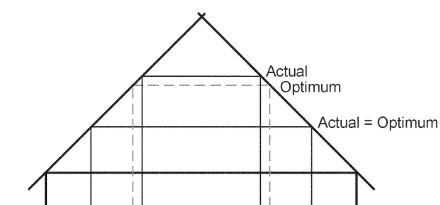
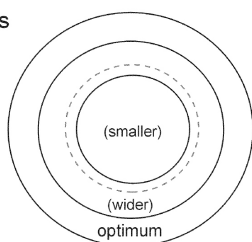


Fig. 10. Structural optima and observed placement of internal post rings.

First, this may be seen in the use of partitions. Half of those structures with evidence for internal partitions (103 structures) divided up the periphery radially – two in five of these were associated with the entrance – and one in four used annular partitions. A further one in four structures revealed the chordal division of space, a practice most popular in Later and Roman Iron Age stone structures in the Tyne–Forth region and north Wales, which reflects the use of chordal bed arrangements. Another way of identifying the differential use of space is by analysing patterns of

flooring. For one in ten structures, only one part of the enclosed area is apparently floored, usually paved, whilst the rest is presumably of earth, or decayed organic flooring. Analysis of plough-damaged and robbed data revealed that *dual flooring* is a genuine prehistoric practice and not simply an accident of survival, with paving and cobbling of the whole floor a predominantly Later and Roman Iron Age practice. Of the 104 structures with dual flooring, the most popular arrangement is an annular division of space, reflecting the reasonably common practice of paving the periphery. There is also a strong trend for the front/back division of space, and in only 30 structures this was directly associated with paving the entrance. Discrete areas of paving were most commonly associated with the hearth. Overwhelmingly then, for much of prehistory, the focus is on the periphery: dividing it up and dividing it off.

It is suggested that some roundhouses were used for stalling animals, either alongside human inhabitants in larger structures, or separately in ancillary or former domestic structures. With regard to the ethnographic literature surveyed, half of the 20 roundhouse-using communities provided space for livestock, commonly cows and calves or goats. Those who did not often had an external protective stockade. Double- and triple-ring structures were twice as likely to house livestock as were smaller, simple-ring structures, providing a correlation between house size and use as a byre-dwelling. In most cases housing is for the overnight period only, with animals partitioned off from the human inhabitants, or tethered. The Kipsigis, however, allow their sheep to settle at will whilst they sleep in the attic, with only some goats tethered around the wall (Peristiany 1939, 158; Orchardson and Matson 1961, 85). It is thus not only possible to share living space with livestock but the practice is relatively common in modern African pastoralist societies, as well as in the longhouses of late prehistoric continental Europe and medieval Britain. Advantages of stalling animals within the house include an increase in house temperature, greater ease regarding milking and also the collection of dung (Gebremedhin 1971, 120; H. Murray pers. comm.). Both sheep and cattle were housed in Reynolds' first Moel y Gaer House (Reynolds 1988, 18) and six Dexter cows were successfully stalled in Murray's Kintore

House over the winter of 2004–2005.³¹

Analysis of soil phosphates at Cat's Water, Fengate, revealed different levels in different structures, leading Pryor (1984, 218) to conclude that both animals and humans occupied roundhouses, but that they did so separately. A more intensive study of phosphate levels within individual structures at Earlier Iron Age Erw-wen and Later Iron Age Moel y Gerddi (both Gwynedd), revealed higher levels at the periphery and low values – suggestive of deliberate cleaning – towards the centre (Kelly 1988, 115–17). A similar pattern was found at Earlier Bronze Age Lintshie Gutter (Lanarkshire), Roman Iron Age Cefn Graeanog (Gwynedd) and perhaps also at Later Iron Age Dalnaglar in Perthshire (Banks 1995; Conway 1983; Stewart 1961–2). This might support the concept of animal stalling in some roundhouse peripheries, or parts of peripheries, with human occupation concentrated elsewhere in the periphery, in the central area, and on the upper floor. In southern England, sheep generally represent c. 50% of later prehistoric site assemblages (D. Serjeantson pers. comm.). In north and central Britain, few good bone assemblages survive, because of the acidic nature of many of the soils; cattle, however, were apparently the dominant species at a number of sites in north-east England and south-east Scotland, including Catcote and Thorpe Thewles in Cleveland; Coxhoe in Durham; Doubstead, Hartburn and Kennel Hall Knowe in Northumberland; and Broxmouth, Dryburn Bridge, and Port Seton East in East Lothian (Pope 2003), although the preferential survival of cattle bone is clearly an issue here.

In summary, Hingley (1990) was correct to suggest a centre/periphery division of space in the roundhouse. However the traditional active centre/inert periphery dichotomy can now be questioned, with evidence for fairly active peripheries at a number of sites. Evidence from north and central Britain reveals that the area given over to peripheral space is greater than that of the centre. It also indicates that the periphery has most influence over structure design, with a general respect for structural principles negotiated to ensure the greater provision of peripheral space. Where we have evidence for internal partitions and the practice of dual flooring, these reveal an emphasis on peripheral space: dividing it up and dividing it off. It can be argued that this concern

with the periphery is, in some structures, a result of the use of this area for stalling animals. The ethnographic literature abounds with evidence for roundhouses functioning as byre-dwellings, as also attested in experimental reconstructions. There is supporting evidence from phosphate analyses and from wear-gullies in structure peripheries, especially in the ring-ditch structures of northern Britain. We can perhaps characterise these structures as year-round dwellings which see the over-wintering of livestock, perhaps sheep and goats, but more likely cattle, especially between the Forth and the Tees. It is possible that only young animals and their mothers or only milking animals were housed, certainly beyond winter (H. Murray pers. comm.).

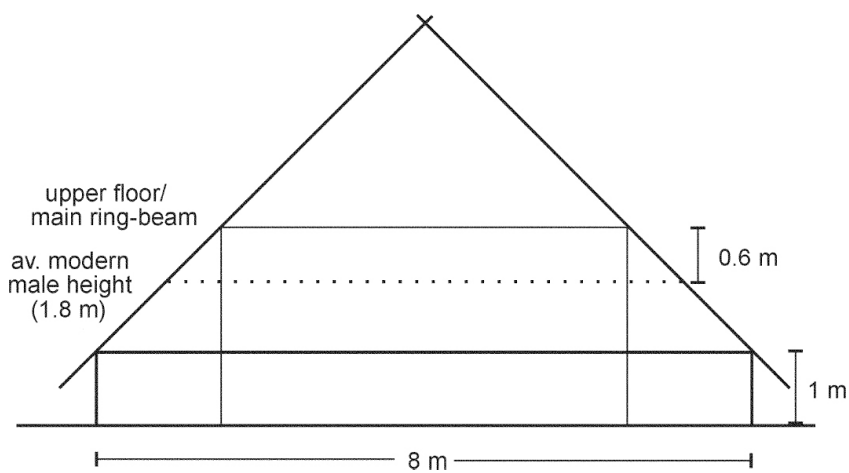


Fig. 11. Vertical use of space in the average prehistoric circular structure.

	<i>Simple-Ring</i>	<i>Double-Ring</i>
Ring-bank	c. 3–9 m	c. 7–9 m
Stone wall	c. 3–9 m	c. 8–10 m
Wall slot	c. 4–9 m	c. 8–11 m
Post wall	c. 4–9 m	c. 7–11 m

Table 3. Usual range in diameter according to structural type and wall type.

Raised space and external spaces: moving beyond the floor plan

Diana Reynolds (1982) first suggested the possibility of upper floors in prehistoric roundhouses. An upper floor might be used for

sleeping and storage; evidence for the latter has perhaps been revealed at Lairg CS 4 in Highland Scotland (McCullagh and Tipping 1998). In double-ring structures, between 20–30% of structure volume lies above the main ring beam, in the roof space; without an upper floor this is effectively dead space. However, the main ring beam actually provides the structural opportunity for the creation of an upper floor. In the average prehistoric structure, this would mean that only c. 15 m³ of internal space was wasted above head height, and even this may have been used for hanging food or equipment (Fig. 11). In addition, a full attic or chordal loft works to strengthen a structure by striking chords across the diameter (Reynolds 1983, 188). Table 3 reveals that structures up to 9 m in diameter can be constructed without an internal post ring; nevertheless many 7–9 m diameter structures do have one. Whilst this may reflect a tendency towards *overbuilding* (cf. Pope 2003), it could indicate that in some cases an internal post ring was primarily used to support an upper floor. Table 3 may also suggest that structures less than 7 m in diameter were not provided with an upper floor. In simple-ring structures, it is believed – from ethnographic parallel – that storage would instead take place in the periphery.

In most double-ring structures the post ring is positioned slightly nearer to the centre than Hill's (1984) structural optimum dictates (see above). This means that the main ring beam is positioned slightly higher up the structure, which serves to decrease the amount of space available for an upper floor. Peripheral space is apparently increased at the expense of attic/loft space. In triple-ring structures, however, it is the inner zone that is generally widened, whilst the main ring beam is positioned at the structural optimum, thereby restricting peripheral space and maximising attic/loft space. From this, we might assume that both areas are important in structure design but that peripheral space is ranked above attic/loft space where an inner zone is not provided. If, however, we accept the alternative possibility, that the moving in of the post ring is an indicator of a roof pitch greater than 45° – the position of the main ring beam serving to counteract the increased weight of thatch towards the centre of the roof – we have a very different scenario. In this case, we may see increased roof pitch as a means of

providing increased attic/loft space; this design also increases peripheral space and adheres to structural norms. Which of the two interpretations is correct is difficult to say; it may be that each is valid in different contexts.

In later prehistory, storage is traditionally seen as taking place in ancillary structures, or in pits, pots and in alcoves, often in the structure periphery. However, the ethnographic literature reveals a much more varied approach to storage in roundhouses, much of which would remain archaeologically invisible. Racks are suspended from the roof or loft floor, plastered shelves of sticks and pegs are driven into the walls and string bags hang from the rafters (Levin 1971; Andersen 1978, 122–4; 141). In the twenty communities surveyed, storage for one in two was accommodated by the provision of a full attic, partial loft or elevated rack (Pope 2003). Whilst some form an independent structure on four posts, others are supported on internal partitions, occasionally with additional support from a few internal posts (Oliver 1987, 65; Levin 1971; Andersen 1978). Such arrangements are, however, particularly rare in the evidence from prehistoric Britain and the use of a post ring would appear to be the preferred method. Hot air rising from the fire means that an upper floor would be warm and smoky, and food stored there – such as grain, meat or cheese – would become disinfected and well preserved (Oliver 1987; Orchardson and Matson 1961, 85). The initial storage of firewood may take place under the eaves, being transferred to the upper floor so that it becomes blackened, making a very smooth-burning fuel (Andersen 1978; Levin 1971, 146). We might also visualise the storage of hay, straw or wool and hides in an upper floor.

Another place often overlooked in the archaeological consideration of domestic space is the area immediately outside the house (see also Woodward and Hughes this volume). This topic is also frequently ignored in ethnographic accounts, despite the fact that external space is commonly utilised by roundhouse-using communities in Africa because of the hot climate (Larsson 1989, 506). For the Tswana, the yard area provides an open kitchen, an area for the storage of building materials and feed, animal pens, a vegetable plot, a granary, a latrine shelter, and a washing area (Oliver 1987, 131). The use of external eaves space is nevertheless

well-recorded, with the Kikuyu, for example, using the area to store firewood (Anderson 1978). In most Luo houses the wide eaves provide an external, veranda-type space used for domestic tasks. For the Luyia, the deep eaves provide a shaded area, which is enclosed to either side of the entrance where it is used to grind flour (*ibid.*, 133). An archaeological parallel for this was perhaps found at Moel y Gerddi (Kelly 1988, 132). If the author's reinterpretation of the Longbridge Deverill Cow Down house is accepted (Pope 2003), the distribution of pottery suggests that the external area between the house door and the gateway was one of active domestic activity. Alternatively, it may reveal the position of a domestic midden outside the door to the house.

Most common in the external space of prehistoric houses in north and central Britain are boundaries – such as fence lines or ditches – followed by post-built rectilinear structures, pits, and other features/artefacts associated with farming and craft activities. The use of boundaries suggests mixed farming: the enclosure of land either keeping animals in or out, away from crops or plants (Coggins and Fairless 1984). Evidence for outside cooking is relatively rare. Even rarer is upstanding evidence for waste disposal and whilst this may be a result of plough truncation, it can be assumed that most waste was deposited in pits or that organic material was removed to the fields to aid soil fertility. Ethnoarchaeological work suggests that the immediate external space may have been kept swept clean, creating a cleared 'arc' around the door, with material accumulating instead against the structure wall, away from the door, and in artefact traps such as drainage ditches (Rothschild 1991; Joyce and Johanessen 1993; Rothschild *et al.* 1993). Rothschild (1991) also found that formal refuse disposal tends to occur in front of a doorway but at some distance. At the semi-abandoned houses of Zuni, domestic refuse was found at 15–25 m from the house; whilst at the one still-occupied residence, the distance was reduced to 5–10 m (Rothschild *et al.* 1993, 132–6).

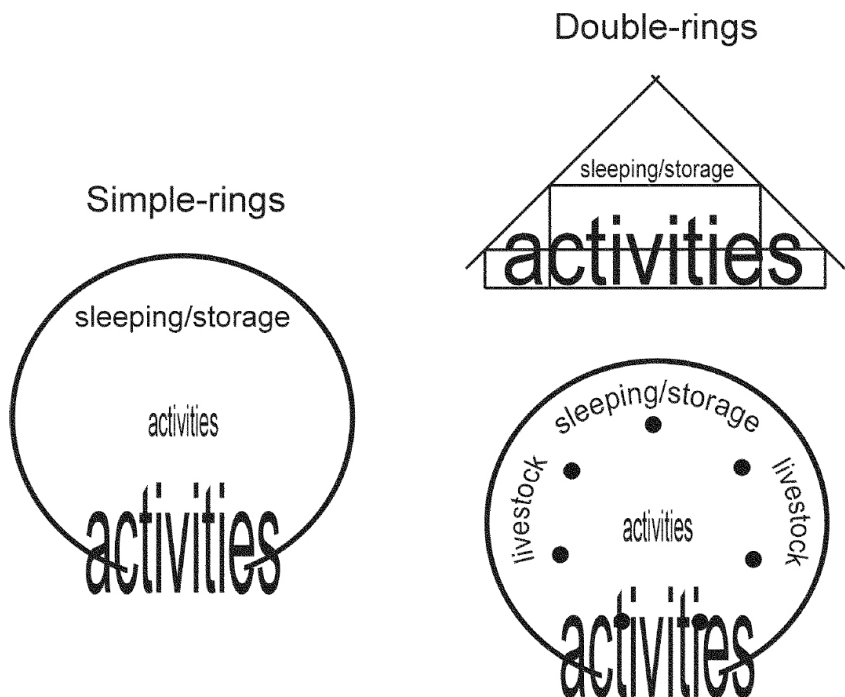


Fig 12. A new model for the prehistoric use of domestic space.

In summary, the later prehistoric British roundhouse was not governed by static social 'rules'. If anything, we have seen the real potential for variation in both design and use of circular structures. Use of domestic space, however, displays two very strong trends. The first is towards the differential use of front and backspace. The front of a structure tended to be associated with daily tasks and activities, as people took advantage of the strongest light near the entrance. There is some evidence pointing towards the use of backspace – particularly in the periphery – for sleeping and storage, activities perhaps better suited to this potentially more private space. Alternatively, these activities may have taken place in the upper floor of double-ring structures. The second trend is a differentiation between central and peripheral space. The central area was a further focus for activity, based as it often was around the hearth. In a number of cases, parts of the periphery may have been associated with the stalling of livestock. It has been suggested that the use of peripheral and attic/loft space was a major influence over structure design. Finally, there was greater use of external

space than is traditionally supposed, mostly consisting of activities associated with farming and craft working. Essentially, active practice tends towards light, easily accessible spaces: the centre, front and outside of the house, whilst more passive practice tends towards the less accessible periphery, backspace and upper floor (Fig. 12).

Discussion

‘As has often happened in the history of science, an essential property of an object was first taken by researchers to be a special case; later on, scientists were afraid to jeopardize their conclusions by submitting them to more rigorous proof ’ (Lévi-Strauss 1963, 162)

In archaeology, structuralism attempts to replace modern functionalist or ‘common-sense’ interpretation with a move towards understanding meaning in the past. In practice, however, a simply more diverse set of formal analogies – often from ethnography – and no more securely universal, are employed. Rather than moving on from functionalism, structuralism merely re-packages much of the processual methodology, with the continuing neglect of the individual in the past. Indeed, Hodder (1986, 35–6) has himself argued that structuralism can be seen as the final stage in overtly processual archaeologies. Also of interest is the fact that work describing itself as post-structuralist chooses not to deconstruct structuralism and instead continues to rely heavily upon it (Bapty and Yates 1990, 6). In post-structuralism, a diversity of approach – which might alternatively be seen as fragmentation – helps to mask a lack of definition and substance (*ibid.*, 2). In the work of Hill (1995a), Brück (1999a), Giles (this volume) and Pope (2003), however, we are witnessing a new phase in prehistoric studies: a move towards losing structuralism, and replacing the functional/ritual, structure/agency and male/female dualisms with concepts of practice and identity. With the deconstruction of structuralism and the acceptance that there is no one reading of the archaeological record – that meaning is wholly dependent on context – we have truly entered the post-processual phase in prehistoric studies (cf. Hodder 1989a, 70).

In their preface to *Architecture and Order* (Parker Pearson and

Richards 1994c), the authors discuss their intention to open the door to a more ‘imaginative’ archaeology. This has certainly been achieved with the cosmological model. Without doubt such work is inspirational, its ideas variously described as ‘exciting’ and ‘stimulating’, but there are nevertheless serious methodological problems to address (cf. Cunliffe 1999; Hingley 1999). Often described as post-processual, the degree to which the model overlooks context is remarkable: be it in the uncritical application of structuralist theory, analogy and narrative; the disregard for taphonomy, agency, and regional variation; the marginalisation of the environment; or the over-reliance on a biased orientation dataset and a handful of cherry-picked sites. There tends to be a lack of critical analysis in prehistoric studies: we often accept and build upon the work of others without question. If, however, this work is methodologically unsound, we must be prepared for the long-term consequences of such a casual approach. As archaeologists, we have a responsibility both to the past and to non-archaeologists and whilst we now accept that we cannot provide an archaeological ‘truth’ – not least because of the nature of our evidence and our own inherent biases – providing a distinctly *false* history can eventually have serious repercussions in the present.³² Archaeology is still a young discipline with much groundwork to do; the cosmological model has shown that we are too keen too soon: the temptation has been to cut corners.

There is now a desire to move away from theoretical determinism as a new generation of prehistorians are again concerned with methodology (cf. Hingley 2003). Accepting that we are naturally subjective creatures, a self-aware archaeology might now attempt to assess the degree of subjectivity in interpretation. Ethical researchers, those with a sense of social responsibility, should adapt their approach when it becomes clear that it is overly subjective (Hodder 1986; Wylie 1993, 24). Sites should not be deliberately selected to fit a model, whilst data which contradict that model are ignored, or mysteriously transformed via the concept of ‘resistance’ (Hodder 1986, 53; Cunliffe 1999). In all, structuralism – with its tolerance of overly subjective interpretation – is not the best way to achieve a contextual archaeology. The alternative is via an archaeology of practice: incorporating multi-disciplinary theory and

solid data analysis to consider structure and agency through time and across space, at a variety of different scales (site, landscape, and region), and alongside broader trends. We must move towards engendering prehistory, without recourse to abstract and distinctly Marxist ideas of sex and power (Hodder 1989a, 71–2). In anthropology, Carsten and Hugh-Jones (1995) identify a continuing tendency for focus on ritual and ideology. After Bloch (1991), they call instead for a more balanced, increasingly integrated ‘anthropology of everyday life’ (Carsten and Hugh-Jones 1995, 45). An ‘archaeology of everyday life’ might now be our aim as we narrow the gap between interpretation in anthropology and archaeology.

Prior to the cosmological argument, Hingley (1990, 143) warned against the reduction of the settlement record to a single oversimplistic model. Nevertheless, subsequent approaches to the use of space were undertaken without recourse to the wider dataset and conclusions were drawn from a handful of what might be considered to be unrepresentative sites. The result was a somewhat static model of the prehistoric use of domestic space, which it was argued was valid across Britain throughout the first millennium BC (Parker Pearson 1999). Having identified the annular division of space, Hingley felt it necessary to acknowledge forthcoming work by Parker Pearson which discussed left/right organisation. These were obviously two very different conclusions. Hingley (1990, 143) suggested a chronologically-based solution to the problem, with a transition from Bronze Age diametric organisation to

Iron Age concentric organisation. We now know, however, that this does not fit the evidence. For Hill (1995b), the problem could be solved using the device of regionality: northern annularity based around the hearth, contrasting with southern bipartite division based on the threshold. This scenario is perhaps more likely, but if the front/back division of space is, as suggested below, a subconscious organising principle, we might yet find evidence for its existence in the south, as well as in the north. Haselgrove *et al.* (2001, 14) call for further research on regional differences in roundhouse organisation and this must now be one of our main concerns.

This paper has shown that the use of domestic space in prehistory

was not generally dictated by sun-based belief systems, visible through roundhouse orientation. In addition, the left/right patterning of activities identified in Wessex may be a tradition peculiar to the large Early Iron Age houses of that region. Interestingly, a Middle Iron Age tradition for the deposition of pottery in the left-hand terminal (facing the house) of drainage gullies has now been suggested for Northamptonshire (Woodward and Hughes this volume), but whether this extends a left/right world view further north remains to be seen. Where spatial analysis has been undertaken on prehistoric houses elsewhere, a left/right division of space was found in only a minority of cases. In Middle Bronze Age southern England, only 17% of 23 houses had a left/right distribution of finds (Brück 1999b). In north and central Britain, no left/right distinction is found in the ordering of space until the Later Iron Age and even then this occurs only in 10% of structures. Only one of the burnt-down Iron Age longhouses in Jutland examined by Webley (2003) revealed a left/right patterning of finds. Nor was a left/right ordering of space identified in recent work on longhouses in the Netherlands (Gerritsen 2003). In all of the above studies, the main trend identified was the front/back division of space. Is the left/right division of space a phenomenon restricted to the Iron Age of southern England? Only a new work of synthesis will answer this question.

Both Hill (1984) and Reid (1989) were correct: the people designing roundhouses had both structural and spatial concerns in mind. Regarding the latter, the author agrees with Brück (1999b, 158) that the ordering of space within the roundhouse tends to reproduce that created by the architecture itself. Whilst front/back division has been identified in longhouses on the near Continent, the roundhouse form also allows the possibility of organising according to centre/periphery. Whilst both types might be explained as hearth-inspired, there is little direct indication of this. Instead, it might be suggested that centre/periphery is a conscious organising principle – as seen in decisions made regarding the provision of peripheral space – whilst front/back is a more subconscious mechanism, associated with the desire for light and the potential for contact/privacy. Giddens (1984) discusses the idea of ‘front’ and ‘back’ regions regarding displays of human behaviour.

His 'front' regions consist of face-to-face encounters and performed, increasingly prescribed behaviour; his 'back' regions are less formal, increasingly autonomous, and to some extent subversive. Whilst we can see this as an extension of the public/private dualism, the analogy is perhaps more successfully described by Giddens as onstage/backstage or classroom/staffroom.³³ Both mechanisms – front/back and centre/periphery – might then be seen as being involved in the creation of private space in an otherwise fairly 'open' architectural form. The result is a light and easily accessible front and centre, with the 'deeper', potentially more private, areas at the back and sides of the house, especially in the periphery and in the loft/attic.

Brück (1999b, 158) notes a considerable degree of variability in the use of space in Middle Bronze Age houses, a fact which is also apparent in [Figure 7](#). In addition, there is potential for *adaptability* in the use of domestic space, for example in the use of movable looms, as argued above. Hilary Murray's active use of the Kintore House as an animal byre reveals the real value of utilising movable hurdles as partitions – few of which would survive archaeologically – and even a detachable door. A good example of the adaptability of space can be found in nine structures from north and central Britain which have a peculiarly high proportion of internal stake holes, at the sites of Ballanicholas on the Isle of Man, Crawcwellt West in Gwynedd, Fisherwick III in Staffordshire, Fishers Road East in East Lothian and Roxby in North Yorkshire (Pope 2003). Five of these structures are associated with metalworking activity: iron smelting, smithing, and bronze working. The high number of stake holes might then reveal the use of movable hurdles, both to control light – making changes in flame colour more visible – and to protect against draughts (A. Heald and H. Murray pers. comm.). What might be represented is a series of metalworking events, when the use of space within the structure was negotiated and structured according to conditions at the time of use. For prehistory then, whilst certain dominant organising principles might be identified, emphasis must also be placed on the potential for variability and adaptability in the use of domestic space.

Conclusions

‘to understand the power of domestic space as a social construct, one must look beyond ritual action and grand cosmological belief systems and into the practical actions of daily life’ (Pader 1993, 114)

The author agrees with Boast and Evans (1986) regarding the social importance of the transition from the Later Neolithic–Earlier Bronze Age to the Later Bronze Age–Iron Age, but sees this as a long-term, multifaceted process, not simply a case of the ‘ritual transfer’ of ideologies from monuments to houses, as the cosmological model might suggest. The cosmological argument has been beneficial in that it acknowledges the existence of long-term and widespread meaning in the past (Parker Pearson 1999, 67; Giles and Parker Pearson 1999). Our understanding of *cosmology* – as a mechanism which guides human action – has increased, and discussion of what constitutes structuring principles is certainly welcome (*ibid.*). However the attempt to understand prehistoric cosmologies via top-down structuralism has resulted in studies which actually work against the aims of Lévi-Strauss in understanding the nature of human society. Forcing our own structure onto the data – based on the mistaken assumption that opposition is universal – denies us the opportunity to glimpse *prehistoric* behaviour. By changing the way we approach our evidence, this paper instead reveals apparently genuine trends in the ordering of space within the roundhouse, which may actually go some way towards identifying Lévi-Strauss’ structuring principles, using the archaeological record. Alongside the potential for variation and adaptation regarding use of space, people in later British prehistory seem to have been driven by the desire for light and for contact, and by the potential for privacy.

It remains possible that there were sun-based traditions in the Iron Age, but the current model has failed to identify them with any conviction. Sun-based traditions would appear, at present, to be primarily focussed around communal sites until perhaps the Later and Roman Iron Age, when a fairly standardised eastern orientation can be seen in house design. Further work, however, will consider the impact on orientation of changes in the seasonal use of landscapes at the end of the Earlier Iron Age (Pope 2003). It is topics like these that demand new work, at a variety of different scales, identifying both change through time and variation across

space at the different levels of site, landscape and region. We should continue the work of Hill (1995a) and Brück (1999b) by studying depositional practices and employing artefact analyses at house and site level, as undertaken by Webley (2003) and Woodward and Hughes (this volume). With an increasingly landscape perspective, more consideration of annual tasks and routines might help reveal the role of houses with regard to seasonality and transhumance (Fitzpatrick 1997; Pope 2003). Linked to this is work by Brück (1999b) and Gerritsen (2003) on the cultural biography of houses, which would benefit from more experimental work on structure lifespans (Pope 2003). We can also use the house data as a way into broader-scale trends such as long-term structures, social change and regional identities.

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Notes

1. Material in this paper was first presented in 1999 at the Scottish Archaeological Forum's *Circular Arguments* roundhouse conference in Glasgow.
2. In theory comprising all excavated and published roundhouses north of a line from Aberystwyth to the Wash, but excluding complex Atlantic architecture. Whilst almost two thirds of the structures are of Later Iron Age and Roman Iron Age date (c. 400 BC–AD 400), nearly 240 structures (from 47 sites) may date to the Earlier Iron Age (c. 800–400 BC) – perhaps more than might be expected.
3. Principles which structure social structures (Tilley 1989, 190).

Tilley's term is preferred here over Lévi-Strauss' *structural principles* because of the potential confusion regarding the latter when used in architectural studies.

4. Much of the material in Parker Pearson and Richards (1994a), Parker Pearson (1996), and Fitzpatrick (1997) was originally presented at a meeting held in Cambridge in 1989.

5. Working under the supervision of J.D. Hill.

6. A view clearly stated by Hingley (1990, 132).

7. The Bororo explicitly organised themselves around *their own* belief in an opposition between nature and culture, making them a perfect case-study. Lévi-Strauss noted that few societies have such a complex metaphysical system (1973, 230; 234).

8. A valid objective given male dominance in the historical West and in many modern, non-Western societies, but nevertheless interesting in the context of the rise of feminist politics at this time.

9. Clarke's (1972) model is now discredited (e.g. Ehrenberg 1989, 143–5), and that of Ellison (1981) and Drewett (1982) – which was developed from it – has also been called into question (*ibid.*, 146–7; Brück 1999b; Pope 2003). Hingley's (1990) conclusions regarding the transition from Bronze Age to Iron Age social organisation and gender in the domestic sphere rest upon these models and thus also need re-assessment.

10. Such work is heavily influenced by Bourdieu's (1973) analysis of the Kabyle house, which was attempting to move beyond structuralism yet remained fairly reliant upon it (I. Hodder pers. comm.). Bourdieu's approach can now be seen as strongly androcentric and so requires renewed consideration.

11. Various reviews of the Dun Vulcan report have highlighted taphonomy-based problems (Gilmour and Cook 1998; Hunter 1999; Armit 2000); similar concerns have been voiced regarding Richards' (1991) interpretation of the Skara Brae houses (Clarke 2003).

12. As opposed to the *subconscious* division of space recognised by Bourdieu (1973; 1977).

13. For the Marakwet of Kenya, for example, the deposition of goat faeces beside male huts is linked in one paper to concepts of female fertility (Parker Pearson and Richards 1994b, 27), and in another represents male control over animals (Parker Pearson 1996, 119).

14. Archaeologists now recognise that size does not always represent status and status is not necessarily synonymous with men (cf. Pope 2003). Childe's interpretation – a product of its time and of his politics – is heavily laden with the concept of evolutionary progress, alongside

strong Marxist and androcentric overtones.

15. An alternative might be to see the smaller bed belonging to the conjugal couple with the larger one reserved for their children.

16. For new work on the use of symmetry in structure design see Pope (2003).

17. In the analysis, 'west' was given a fairly broad definition: between 225–315°, essentially from north-west to south-west.

18. As suggested above, the standardisation in orientation at these sites might prove to be attributed to factors other than those suggested by the cosmological model (cf. Pope 2003).

19. Whilst this analysis uses the full orientation dataset, chronological and regional breakdowns are provided in Pope (2003). This work will soon be published.

20. Obtained from the 1952 *Climatological Atlas of the British Isles* published by the Meteorological Office.

21. From an analysis of 57 Bronze Age structures, a preference for south-east through to south is seen for those in south-east England, whilst in the far south-west of England the focus is on south with a slight trend towards the south-west (cf. Oswald 1991, figs. 20–22).

22. Although alternative traditions – apparently based around sunrise throughout the year and midsummer sunset – were found in the enclosures of north and central Britain (Pope 2003).

23. The date of these monuments is still under debate as either later prehistoric or early medieval.

24. The data span the period from the earliest Bronze Age until the end of the Roman Iron Age and extend across more than half of Britain.

25. The function of pits is rarely discussed but is often referred to simply as involving storage (cf. Brück 1999b). The act of lining one in five pits with clay or stone slabs may suggest the containment of water, or perhaps milk. Other pits may once have been lined with basketwork or timber, which has since decayed. Such pits were presumably also covered with an organic lid. Storage apart, pits could have been used in various activities such as boiling food, washing utensils or the body, watering stalled livestock, or for quenching metal.

26. Only four convincing examples have been identified in northern and central Britain (cf. Pope 2003); it seems likely that most looms used in prehistoric houses were movable (cf. Britnell 1977).

27. Hilary Murray is currently recording daily and annual lighting conditions within the Kintore House at Methlick, Aberdeenshire, which could well modify the picture presented here.

28. The low wall height of most structures makes windows unlikely.

Whilst flaps in the roof are found in traditional African roundhouses, it is suggested that such features would prove unsuitable in a temperate climate.

29. Compare Figure 8 with Drewett's (1982) figure 13 where the representation of light is deliberately skewed towards the right of the structure.

30. The annular zone between the centre and the periphery.

31. Contrary to expectations, the stalls did not give off any unpleasant smell prior to mucking out. This is presumably due to the breathable and absorbent qualities of the structure (H. Murray pers. comm.).

32. Take, for example, the reaction against Simon James' deconstruction of the Celts in the broadsheets, where Iron Age specialists were denounced as English Nationalists; or the actions of the modern druids at Seahenge who believed they had a ritually-based claim on the monument.

33. The continued use of the public/private dichotomy in recent work is lamentable; a more nuanced understanding is being sought by Laura Cripps in her research at the University of Leicester.

Bibliography

- Aldhouse-Green, M. 1999. Comments on M. Parker Pearson's 'Food, sex and death', *Cambridge Archaeological Journal* 9 (1), 61–62.
- Allison, P. 1999a. Introduction, in Allison 1999b, 1–18.
- Allison, P. (ed.) 1999b. *The Archaeology of Household Activities*, 1–18. London: Routledge.
- Andersen, K.B. 1978. *African Traditional Architecture*. Oxford: Oxford University Press.
- Armit, I. 2000. Review of M. Parker Pearson and N. Sharples, 'Between land and sea: excavations at Dun Vulan, South Uist', *Antiquity* 74, 244–245.
- Ascher, R. 1961. Analogy in archaeological interpretation, *Southwestern Journal of Anthropology* 17, 317–325.
- Ashbee, P. 1970. *The Earthen Long Barrow in Britain*. London: Dent.
- Banks, I. 1995. Phosphate and magnetic susceptibility, in J. Terry Excavations at Lintshie Gutter unenclosed platform settlement, Crawford, Lanarkshire, 1991, *Proceedings of the Society of Antiquaries of Scotland* 125, 417–421.
- Bapty, I. and Yates, T. 1990. Introduction: archaeology and post-structuralism, in I. Bapty and T. Yates (eds), *Archaeology after Structuralism: Post-structuralism and the Practice of Archaeology*, 1–32. London: Routledge.

- Barber, J. (ed.), 1997. *The Archaeological Investigation of a Prehistoric Landscape: Excavations on Arran 1978–1981*. Edinburgh: Scottish Trust for Archaeological Research.
- Barrett, J. 1994. Defining domestic space in the Bronze Age of southern Britain, in Parker Pearson and Richards 1994c, 87–97.
- Barrett, J. 1997. Different perceptions of organising life, *Archaeological Dialogues* 4 (1), 49–52.
- Barrett, J. 2001. Agency, the duality of structure, and the problem of the archaeological record, in I. Hodder (ed.), *Archaeological Theory Today*, 141–164. Cambridge: Polity Press.
- Bersu, G. 1977. *Three Iron Age Round Houses in the Isle of Man*. Isle of Man: Manx Museum and National Trust.
- Bloch, M. and Bloch, J.H. 1980. Women and the dialectics of nature in eighteenth-century French thought, in MacCormack and Strathern 1980, 25–41.
- Bloch, M. 1991. Language, anthropology, and cognitive science, *Man* 26 (2), 183–198.
- Boast, R. and Evans, C. 1986. The transformation of space: two examples from British prehistory, *Archaeological Review from Cambridge* 5, 193–205.
- Bourdieu, P. 1973. The Berber House, in M. Douglas (ed.), *Rules and Meanings*, 98–110. Harmondsworth: Penguin.
- Bourdieu, P. 1977. *Outline of a Theory of Practice*. Cambridge: Cambridge University Press.
- Britnell, W.J. 1977. How upright was the warp-weighted loom? *Antiquity* 51, 238–239.
- Brooks, R.L. 1993. Household abandonment among sedentary Plains societies: behavioral sequences and consequences in the interpretation of the archaeological record, in Cameron and Tomka 1993, 178–187.
- Brück, J. 1999a. Ritual and rationality: some problems of interpretation in European archaeology, *European Journal of Archaeology* 2 (3), 313–344.
- Brück, J. 1999b. Houses, lifecycles and deposition on Middle Bronze Age settlements in southern England, *Proceedings of the Prehistoric Society* 65, 1–22.
- Burl, A. 1981. ‘By the light of the cinerary moon’: chambered tombs and the astronomy of death, in C.L.N. Ruggles and A.W.R. Whittle (eds), *Astronomy and Society in Britain during the Period 4000–1500 BC*, 243–274. Oxford: British Archaeological Reports British Series 88.
- Cameron, C.M. and Tomka S.A. (eds) 1993. *Abandonment of Settlements and Regions: Ethnoarchaeological and Archaeological Approaches*. Cambridge: Cambridge University Press.

- Carsten, J. and Hugh-Jones, S. 1995. Introduction, in J. Carsten and S. Hugh-Jones (eds), *About the House: Lévi-Strauss and Beyond*, 1–46. Cambridge: Cambridge University Press.
- Chadwick, S. 1960. Early Iron Age enclosures on Longbridge Deverill Cow Down, Wiltshire, in S.S. Frere (ed.), *Problems of the Iron Age in Southern Britain*, 18–20. London: Institute of Archaeology Occasional Paper 11.
- Chadwick Hawkes, S. 1994. Longbridge Deverill Cow Down, Wiltshire, House 3: a major roundhouse of the Early Iron Age, *Oxford Journal of Archaeology* 13 (1), 49–69.
- Champion, T.C. and Collis, J.R. (eds) 1996. *The Iron Age in Britain and Ireland: Recent Trends*. Sheffield: J.R. Collis Publications.
- Childe, V.G. 1931. *Skara Brae: a Pictish Village in Orkney*. London: Kegan Paul, Trench, Trubner and Co.
- Clarke, D.L. 1972. A provisional model of an Iron Age society and its settlement system, in D.L. Clarke (ed.), *Models in Archaeology*, 801–869. London: Methuen.
- Clarke, D.V. 2003. Once upon a time Skara Brae was unique, in I. Armit, E. Murphy, E. Nelis and D. Simpson (eds), *Neolithic Settlement in Ireland and Western Britain*, 84–92. Oxford: Oxbow Books.
- Clarke, D.V. and Sharples, N. 1985. Settlements and subsistence in the third millennium BC, in C. Renfrew (ed.), *The Prehistory of Orkney*, 54–82. Edinburgh: Edinburgh University Press.
- Coggins, D. and Fairless, K.J. 1984. The Bronze Age settlement of Bracken Rigg, Upper Teesdale, Co. Durham, *Durham Archaeological Journal* 1, 5–21.
- Conway, J.S. 1983. An investigation of soil phosphorus distribution within occupation deposits from a Romano-British hut group, *Journal of Archaeological Science* 10, 117–128.
- Cunliffe, B. 1999. Comments on M. Parker Pearson's 'Food, sex and death', *Cambridge Archaeological Journal* 9 (1), 62.
- Cunningham, C.E. 1964. Order in the Atoni house, *Bijdragen tot de taal, land- en volkenkunde* 120, 34–68.
- Denyer, S. 1978. *African Traditional Architecture*. London: Heinemann.
- Drewett, P.L. 1979. New evidence for the structure and function of Middle Bronze Age roundhouses in Sussex, *Archaeological Journal* 136, 3–11.
- Drewett, P.L. 1982. Later Bronze Age downland economy and excavations at Black Patch, East Sussex, *Proceedings of the Prehistoric Society* 48, 321–400.
- Edwards, N. 1990. *The Archaeology of Early Medieval Ireland*. London: Batsford.
- Ehrenberg, M. 1989. *Women in Prehistory*. London: British Museum.

- Ellison, A. 1981. Towards a socioeconomic model for the Middle Bronze Age in southern England, in I. Hodder, G. Isaac, and N. Hammond (eds), *Pattern of the Past: Studies in Honour of David Clarke*, 413–438. Cambridge: Cambridge University Press.
- Fitzpatrick, A. 1994. Outside in: the structure of an Early Iron Age house at Dunston Park, Thatcham, Berkshire, in A. Fitzpatrick and E. Morris (eds), *The Iron Age in Wessex: Recent Work*, 68–73. Salisbury: Trust for Wessex Archaeology.
- Fitzpatrick, A.P., Barnes, I. and Cleal, R.M.J. 1995. An Early Iron Age settlement at Dunston Park, Thatcham, Berkshire, in I. Barnes, W.A. Boismier, R.M.J. Cleal, A.P. Fitzpatrick and M.R. Roberts, *Early Settlement in Berkshire: Mesolithic–Roman Occupation Sites in the Thames and Kennet Valleys*, Salisbury, 65–89. Salisbury: Wessex Archaeology Report 6.
- Fitzpatrick, A.P. 1997. Everyday life in Iron Age Wessex, in Gwilt and Haselgrove 1997, 73–86.
- Gebremedhin, N. 1971. Some traditional types of housing in Ethiopia, in Oliver 1971, 106–123.
- Gerritsen, F. 2003. *Local Identities: Landscape and Community in the Late Prehistoric Meuse–Demer–Scheldt Region*. Amsterdam: Amsterdam Archaeological Studies 9.
- Giddens, A. 1984. *The Constitution of Society: Outline of the Theory of Structuration*. Cambridge: Polity Press.
- Gilchrist, R. 1999. *Gender and Archaeology: Contesting the Past*. London: Routledge.
- Giles, M. and Parker Pearson, M. 1999. Learning to live in the Iron Age: dwelling and praxis, in B. Bevan (ed.), *Northern Exposure: Interpretative Devolution and the Iron Ages of Britain*, 217–231. Leicester: Leicester Archaeology Monograph 4.
- Gilmour, S. and Cook, M. 1998. Excavations at Dun Vulcan: a reinterpretation of the reappraised Iron Age, *Antiquity* 72, 327–337.
- Guilbert, G.C. 1975. Moel y Gaer, 1973: an area excavation on the defences, *Antiquity* 49, 109–117.
- Guilbert, G.C. 1982. Post-ring symmetry in roundhouses at Moel y Gaer and some other sites in prehistoric Britain, in P.J. Drury (ed.), *Structural Reconstruction*, 67–86. Oxford: British Archaeological Reports British Series 110.
- Gwilt, A. and Haselgrove, C. (eds) 1997. *Reconstructing Iron Age Societies*. Oxford: Oxbow Monograph 71.
- Harding, D.W. 1974. *The Iron Age in Lowland Britain*. London: Routledge and Kegan Paul.
- Harris, O. 1980. The power of signs: gender, culture and the wild in the

- Bolivian Andes, in MacCormack and Strathern 1980, 70–94.
- Haselgrove, C. 2004. Society and polity in Late Iron Age Britain, in M. Todd (ed.), *The Blackwell Companion to Roman Britain*, 12–29. Oxford: Blackwell.
- Haselgrove, C., Armit, I., Champion, T., Creighton, J., Gwilt, A., Hill, J.D., Hunter, F. and Woodward, A. 2001. *Understanding the British Iron Age: an Agenda for Action*. Salisbury: Wessex Archaeology.
- Hawkes, C. 1954. Archaeological theory and method: some suggestions from the Old World, *American Anthropologist* 56, 155–168.
- Hill, J.D. 1988. *Celtic Castles in the Air*. Unpublished M.Phil. thesis, University of Cambridge.
- Hill, J.D. 1989. Re-thinking the Iron Age, *Scottish Archaeological Review* 6, 16–23.
- Hill, J.D. 1993. Can we recognise a different European past?: a contrastive archaeology of later prehistoric settlements in southern England, *Journal of European Archaeology* 1, 57–75.
- Hill, J.D. 1995a. *Ritual and Rubbish in the Iron Age of Wessex*. Oxford: British Archaeological Reports British Series 242.
- Hill, J.D. 1995b. The pre-Roman Iron Age in Britain and Ireland (ca. 800 BC to AD 100): an overview, *Journal of World Prehistory* 9 (1), 47–98.
- Hill, J.D. 1996. Hill-forts and the Iron Age of Wessex, in Champion and Collis 1996, 95–116.
- Hill, P.H. 1984. A sense of proportion: a contribution to the study of double-ring round-houses, *Scottish Archaeological Review* 3 (2), 80–86.
- Hillier, B. and Hanson, J. 1984. *The Social Logic of Space*. Cambridge: Cambridge University Press.
- Hingley, R. 1990. Domestic organisation and gender relations in Iron Age and Romano-British households, in R. Samson (ed.), *The Social Archaeology of Houses*, 125–147. Edinburgh: Edinburgh University Press.
- Hingley, R. 1999. Comments on M. Parker Pearson's 'Food, sex and death', *Cambridge Archaeological Journal* 9 (1), 63.
- Hingley, R. 2003. Review of J. Humphrey (ed.), *Re-searching the Iron Age*. http://www.ucl.ac.uk/prehistoric/reviews04_03_hingley.htm (accessed 01/04/04).
- Hingley, R. and Miles, D. 1984. Aspects of Iron Age settlement in the Upper Thames Valley, in B. Cunliffe and D. Miles (eds), *Aspects of the Iron Age in Central Southern Britain*, 52–71. Oxford: Oxford University Committee for Archaeology Monograph 16.
- Hodder, I. 1982a. *Symbolic and Structural Archaeology*. Cambridge: Cambridge University Press.
- Hodder, I. 1982b. *The Present Past: an Introduction to Anthropology for*

Archaeologists. New York: Pica Press.

- Hodder, I. 1984. Burials, houses, women and men in the European Neolithic, in D. Miller and C. Tilley (eds), *Ideology, Power and Prehistory*, 51–68. Cambridge: Cambridge University Press.
- Hodder, I. 1986. *Reading the Past*. Cambridge: Cambridge University Press.
- Hodder, I. 1989a. Post-modernism, post-structuralism and post-processual archaeology, in Hodder 1989b, 64–78.
- Hodder, I. (ed.) 1989b. *The Meaning of Things: Material Culture and Symbolic Expression*. London: Harper Collins.
- Hodder, I. 1999. *The Archaeological Process: an Introduction*. Oxford: Blackwell.
- Hodgson, N., Stobbs, G. and Van der Veen, M. 2001. An Iron-Age settlement and remains of earlier prehistoric date beneath South Shields Roman fort, Tyne and Wear, *Archaeological Journal* 158, 62– 160.
- Hunter, F. 1999. Approaches to artefacts from houses: theories, factoids and methodologies. Paper presented to the Scottish Archaeological Forum conference, *Circular Arguments: the Archaeology of the Roundhouse*.
- Joyce, A.A. and Johannessen, S. 1993. Abandonment and the production of archaeological variability at domestic sites, in Cameron and Tomka 1993, 138–153.
- Kelly, R.S. 1988. Two late prehistoric circular enclosures near Harlech, Gwynedd, *Proceedings of the Prehistoric Society* 54, 101–151.
- Kuper, A. 1988. *The Invention of Primitive Society: Transformations of an Illusion*. London: Routledge.
- Lambrick, G. 1978. Iron Age settlements in the Upper Thames Valley, in B. Cunliffe and T. Rowley (eds), *Lowland Iron Age Communities in Europe*, 103–119. Oxford: British Archaeological Reports International Series 48.
- LaMotta, V.M. and Schiffer, M.B. 1999. Formation processes of house floor assemblages, in Allison 1999b, 19–29.
- Larsson, A. 1989. Traditional versus modern housing in Botswana: an analysis from the user's perspective, in J.-P. Bourdier and N. Alsayyad (eds), *Dwellings, Settlements and Tradition: Cross-Cultural Perspectives*, 503–525. London: University Press of America.
- Levin, M.D. 1971. House form and social structure in baKosi, in Oliver 1971, 143–152.
- Lévi-Strauss, C. 1963. *Structural Anthropology*. New York: Basic Books.
- Lévi-Strauss, C. 1969. *The Elementary Structures of Kinship*. London: Eyre and Spottiswoode.
- Lévi-Strauss, C. 1973. *Tristes tropiques*. London: Jonathan Cape.
- Lévi-Strauss, C. 1983. *The Way of the Masks*. London: Jonathan Cape.
- Lightfoot, R.R. 1993. Abandonment processes in prehistoric pueblos, in

- Cameron and Tomka 1993, 165–177.
- Lyotard, J.-F. 1979. *The Postmodern Condition: a Report on Knowledge*. Manchester: Manchester University Press.
- MacCormack, C. 1980. Nature, culture and gender: a critique, in MacCormack and Strathern 1980, 1–24.
- MacCormack, C. and Strathern, M. (eds), 1980. *Nature, Culture and Gender*. Cambridge: Cambridge University Press.
- Malinowski, B. 1948. *The Sexual Life of Savages in Northwestern Melanesia* (3rd edn). London: Routledge and Kegan Paul.
- McCullagh, R. and Tipping, R. (eds) 1998. *The Lairg Project 1988–1996: the Evolution of an Archaeological Landscape in Northern Scotland*. Edinburgh: Scottish Trust for Archaeological Research Monograph 3.
- Marshall, P., Mulville, J., Parker Pearson, M. and Ingram, C. 1999. *The Late Bronze Age and Early Iron Age Community at Cladh Hallan, South Uist: excavations in 1999*. Unpublished interim report, University of Sheffield.
- Moore, H.L. 1988. *Feminism and Anthropology*. Cambridge: Polity.
- Musson, C. 1970. House-plans and prehistory, *Current Archaeology* 2, 267–275.
- Oliver, P. (ed.) 1971. *Shelter in Africa*. London: Barrie and Jenkins.
- Oliver, P. 1987. *Dwellings: the House across the World*. Austin: University of Texas Press.
- Orchardson, I.Q. and Matson, A.T. 1961. *The Kipsigis*. Nairobi: East African Literature Bureau.
- Oswald, A. 1991. *A Doorway on the Past: Round-house Entrance Orientation and its Significance in Iron Age Britain*. Unpublished B.A. Dissertation, University of Cambridge.
- Oswald, A. 1997. A doorway on the past: practical and mystic concerns in the orientation of roundhouse doorways, in Gwilt and Haselgrove 1997, 87–95.
- Pader, E.J. 1993. Spatiality and social change: domestic space in Mexico and the United States, *American Ethnologist* 20 (1), 114–137.
- Parker Pearson, M. 1996. Food, fertility and front doors in the first millennium BC, in Champion and Collis 1996, 117–132.
- Parker Pearson, M. 1999. Food, sex and death: cosmologies in the British Iron Age with particular reference to East Yorkshire, *Cambridge Archaeological Journal* 9 (1), 43–69.
- Parker Pearson, M. and Ramilisonina. 1998. Stonehenge for the ancestors: the stones pass on the message, *Antiquity* 72, 308–326.
- Parker Pearson, M. and Richards, C. 1994a. Architecture and order: spatial representation and archaeology, in Parker Pearson and Richards 1994c, 38–72.

- Parker Pearson, M. and Richards, C. 1994b. Ordering the world: perceptions of architecture, space and time, in Parker Pearson and Richards 1994c, 1–37.
- Parker Pearson, M. and Richards, C. (eds) 1994c. *Architecture and Order: Approaches to Social Space*. London: Routledge.
- Parker Pearson, M. and Sharples, N. 1999. *Between Land and Sea: Excavations at Dun Vullan, South Uist*. Sheffield: Sheffield Academic Press.
- Parker Pearson, M., Sharples, N. and Mulville, J. 1996. Brochs and Iron Age society: a reappraisal, *Antiquity* 70, 57–67.
- Peristiany, J.G. 1939. *The Social Institutions of the Kipsigis*. London: Routledge and Kegan Paul.
- Plimpton, C.L. and Hassan, F.A. 1987. Social space: a determinant of house architecture, *Environment and Planning B: Planning and Design* 14, 439–449.
- Pope, R.E. 2003. *Prehistoric Dwelling: Circular Structures in North and Central Britain c. 2500 BC–AD 500*. Unpublished Ph.D. thesis, University of Durham.
- Pryor, F. 1984. *Excavation at Fengate, Peterborough, England: the Fourth Report*. Northampton: Northamptonshire Archaeological Society Monograph 2/Royal Ontario Museum Archaeology Monograph 7.
- Ralston, I. 1999. Comments on M. Parker Pearson's 'Food, sex and death', *Cambridge Archaeological Journal* 9 (1), 65–66.
- Rapoport, A. 1990. Systems of activities and systems of settings, in S. Kent (ed.), *Domestic Architecture and the Use of Space: an Interdisciplinary Cross-Cultural Study*. Cambridge: Cambridge University Press.
- Reid, M.L. 1989. A room with a view: an examination of round-houses, with particular reference to northern Britain, *Oxford Journal of Archaeology* 8 (1), 1–40.
- Reynolds, D.M. 1982. Aspects of later timber construction in southeast Scotland, in D.W. Harding (ed.), *Later Prehistoric Settlement in South-east Scotland*, 44–56. Edinburgh: Department of Archaeology, University of Edinburgh Occasional Paper 8.
- Reynolds, P.J. 1983. Substructure to superstructure, in P. Drury (ed.), *Structural Reconstruction*, 173–198. Oxford: British Archaeological Reports British Series 110.
- Reynolds, P.J. 1988. *Butser Ancient Farm Yearbook 1988*. Petersfield: Butser Ancient Farm Project Trust.
- Reynolds, P.J. 1995. The life and death of a post-hole, in L. Shepherd (ed.), *Interpreting Stratigraphy 5 (Proceedings of a conference held at Norwich Castle Museum on Thursday 16th June 1994)*, 21–25. Norwich: Norwich Castle Museum.

- Reynolds, P.J. 2005. The Conderton construct, in N. Thomas, *Conderton Camp, Worcestershire: a Middle Iron Age Hillfort on Bredon Hill*, 85–93. York: Council for British Archaeology Research Report 143.
- Richards, C. 1990. The late Neolithic house in Orkney, in R. Samson (ed.), *The Social Archaeology of Houses*, 111–124. Edinburgh: Edinburgh University Press.
- Richards, C. 1991. Skara Brae: revisiting a Neolithic village in Orkney, in W.S. Hanson and E.A. Slater (eds), *Scottish Archaeology: New Perceptions*. Aberdeen: Aberdeen University Press.
- Rothschild, N.A. 1991. Incorporating the outdoors as living space: ethnoarchaeology at Zuni pueblo, NM, *Expedition* 33 (1), 24–32.
- Rothschild, N.A., Mills, B.J., Ferguson, T.J. and Dublin, S. 1993. Abandonment at Zuni farming villages, in Cameron and Tomka 1993, 123–137.
- Schiffer, M.B. 1985. Is there a ‘Pompeii premise’ in archaeology? *Journal of Anthropological Research* 41, 18–41.
- Schiffer, M.B. 1987. *Formation Processes of the Archaeological Record*. Albuquerque: University of New Mexico Press.
- Stevenson, M. 1982. Toward an understanding of site abandonment behavior: evidence from historic mining camps in the Southwest Yukon, *Journal of Anthropological Archaeology* 1, 237–265.
- Stevenson, R.B.K. 1948–9. Braidwood Fort, Midlothian: the exploration of two huts, *Proceedings of the Society of Antiquaries of Scotland* 83, 1–11.
- Stewart, M.E.C. 1961–2. The excavation of two circular enclosures at Dalnaglar, Perthshire, *Proceedings of the Society of Antiquaries of Scotland* 95, 134–158.
- Strang, A. 1991. Towards a functional classification of round-houses, *Bulletin of the Board of Celtic Studies* 38, 159–163.
- Strathern, M. 1980. No nature, no culture: the Hagen case, in MacCormack and Strathern 1980, 174–222.
- Tate, G. 1861. On the old Celtic town at Greaves Ash, near Linhope, Northumberland, with an account of Diggings recently made into this and other ancient remains in the Valley of the Breamish, *History of the Berwickshire Naturalists Club* 4, 293–316.
- Tilley, C. 1989. Interpreting material culture, in Hodder 1989b, 185–194.
- Tringham, R.E. 1991. Households with faces: the challenge of gender in prehistoric architectural remains, in J.M. Gero and M.W. Conkey, *Engendering Archaeology: Women and Prehistory*, 93–131. Oxford: Blackwell.
- Van der Veen, M. 2001. The Iron Age plant remains, in Hodgson *et al.* 2001, 108–141.

- Wait, G.A. 1985. *Ritual and Religion in Iron Age Britain*. Oxford: British Archaeological Reports British Series 149.
- Webley, L. 2003. Iron Age houses and social space: a case study of the three-aisled longhouses of northern Europe during the pre-Roman and Early Roman Iron Age, in J. Humphrey (ed.), *Researching the Iron Age*, 59–68. Leicester: Leicester Archaeology Monograph 11.
- Webley, L. 2007. Households and social change in Jutland, 500 BC– AD 200, in C. Haselgrove and T. Moore (eds), *The Later Iron Age in Britain and Beyond*, 454–467. Oxford: Oxbow Books.
- Wylie, A. 1985. The reaction against analogy, *Advances in Archaeological Method and Theory* 8, 63–111.
- Wylie, A. 1993. A proliferation of new archaeologies: ‘beyond objectivism and relativism’, in N. Yoffee and A. Sherratt (eds), *Archaeological Theory: Who Sets the Agenda?*, 20–26. Cambridge: Cambridge University Press.

The character of Earlier Iron Age societies in Scotland

Ian Ralston and Patrick Ashmore

Introduction

We may compare standard views of the Scottish archaeological record for the last millennium BC to a hammock, with perceived high points at either end, represented respectively by the Later Bronze Age record and by that of the Iron Age in its mature phases – equivalent to the Middle Iron Age of more recent commentators on the Atlantic North-West (e.g. Armit 1997; Hingley 1998). The metalwork, more especially its sheet-metal component including such items as shields, has long been considered symptomatic of the relative elaboration of local Late Bronze Age societies and their integration into wider cultural spheres.

To use metalwork as an indicator a second time, the Iron Age from at least the third century BC is marked by the appearance of material in the La Tène tradition, including conventionally Early Celtic Art objects, arguably the earliest of which – certainly as a grand object – is the pony-cap from Torrs in Dumfries and Galloway (Jope 2000, plates 100–1). Peter Wells (2001) has recently stressed the apparent significance of the culturally peripheral depositional contexts of a number of such remarkable items of Early Celtic Art, including the helmet found by a badger in the cave at Agris, Charente, in western France. Albeit headgear for a horse rather than a warrior, Torrs may be fitted into the context of culturally peripheral deposition of exceptional pieces in this style. The period with which we are concerned here occupies the intervening centuries, between the demise of the late Bronze Age industries and c. 300 BC.

The systematisation of the results from related fields of enquiry has tended to provide additional support for a perspective in which the last few centuries BC see a change of tempo, an upswing from a more mundane record indicative both of relatively weak hierarchies and relatively gradual change. The most graphic instance, in terms of the area demonstrably affected, is provided by the dramatic decline of the forest cover. Richard Tipping's exposition, from palynological data, for the opening of the landscapes of southern Scotland on a previously unprecedented regional scale from about the middle of the first millennium BC, is very important in this regard (Tipping 1994, 31–3).

It may be suggested that a perceptible enrichment of the material aspects of Iron Age societies in Scotland is well underway by around 300 BC, and that its defining characteristics were preceded by extensification and intensification of the use of southern Scottish landscapes. There is also a renewed engagement with practices and styles in the employment of material culture that display more than a measure of familiarity with wider temperate European practices. Amongst slightly later artefact types, for example, the rotary quern – apparently here as elsewhere in temperate Europe rapidly disseminated after c. 300 BC – is a key indicator of this Scottish participation in generalised technological innovations. It seems reasonable to infer that the social and economic transitions that may well underpin such changes would also have occurred here, albeit possibly in more muted form, since the beginning of the Scottish Middle Iron Age (*sensu* Armit 1997 and others) does not show, for example, the dramatic upswing in iron production apparent in some areas of continental Europe.

A similar familiarity with wider temperate European practices may also be considered characteristic of the early end of the metaphorical hammock. As a *Leitmotiv* for that, we may cite the particular strangenesses in the deposits of human remains and associated artefacts such as the decapitation practices revealed by the Shepherds' re-examination of the Late Bronze Age activity within Covesea cave in Moray, echoed at Heathery Burn in County Durham, and at Le Trou de Han and Le Trou de l'Ambre in Belgium and elsewhere (Shepherd 1995). Indeed the artefacts from the same levels at Covesea have their best parallels from various parts of

Europe, including southern England and northern, western and eastern France, suggesting long-distance networking.

The sagging middle of the hammock, between on the one hand the demise of the Late Bronze Age industries and, on the other, the varied indicators of increasing complexification in the last centuries BC, is the topic of this paper. What were the societies of earlier Iron Age Scotland like? Is there any reason to revise prevailing views?

Some aspects of the record for the half millennium preceding about 300 BC are well-known. Most widespread geographically are architectural variants of the substantial circular roundhouses which, in some areas north of Cheviot, continue into the succeeding span. These buildings, remarkable rather for their scale than for the particular elaboration of their architecture, include for the Earlier Iron Age, initial versions of what subsequently developed into Armit's complex Atlantic roundhouses, as on Orkney (see also Henderson this volume). East of the Highland massif, their comparators are generally substantially timber-built, and include dry land examples as well as at least some crannogs.

The broad pattern described above – and the importance of substantial houses more generally in the interpretation of the Scottish Iron Age – was enunciated over a decade ago by Richard Hingley (1992). To our knowledge nothing has emerged in the intervening years to require any radical modification to that perspective. Elsewhere, Rachel Pope (2003; this volume) contends that the period c. 800–600 cal. BC is one of significant change in roundhouse architecture more generally in central and northern Britain. Despite the attention that has been paid to it in recent years, the potential for a reevaluation of this architecture is considerable, for so far it has not been demonstrated whether Atlantic roundhouses and their equivalents elsewhere were occupied all year round, nor indeed whether they were continuously occupied in any sense at all.

Some, perhaps many, of the hill- and promontory forts of Scotland, or at least parts of it, also enjoyed their *floruit* during the earlier centuries of the Iron Age. General treatments of this class of sites have correctly drawn attention to the initial use and sometimes potentially the enclosure of such hilltop sites within the Later Bronze Age – as for example has been demonstrated for the core of

the site at Traprain Law, East Lothian, or Eildon Hill North, Scottish Borders (Owen 1992) discussed further below. In some cases – as at Traprain itself – whilst recourse to the hilltop and even occupation may be demonstrable, it cannot be shown that they were enclosed at an early date. Others, following Alcock (1987, fig. 4), have equally stressed the continued use and construction of this broad class of site well into the first millennium AD, so hillforts are far from corresponding wholly with earlier pre-Roman Iron Age use.

Artefacts, contrastingly, have played a much more spartan role in assessments of this span. In general a small number of items have been highlighted; and subjected to radically different interpretations. The few variant Hallstatt C Gündlingen swords from Scotland (cf. O'Connor this volume) may be considered axiomatic of this. At one scale, within Scotland, their predominantly eastern and riverine distribution has been suggested as indicative of a 'classic raiding pattern' involving new arrivals from continental Europe (Burgess 1974, 213). At another, they conform to much broader continental-scale patterns of distribution, with riverine/wetland contexts of deposition of copper alloy examples characteristic of a broad swathe of northern temperate Europe (Torbrügge 1970–1). Minimally, they are indicative of the continuing 'Europeanisation' of contacts that already characterised some phases within the Later Bronze Age.

Such links, in Scotland's case, re-appeared more forcibly in the late first millennium BC, but never wholly evaporated across the intervening period. The conspicuous consumption of artefacts through special deposition otherwise seems rare throughout the Earlier Iron Age. There is undoubtedly more that can be extracted from the prosaic material culture record, however, as is becoming plain, for example from Catherine McGill's consideration of the pottery record from eastern Scotland outlined below (McGill in preparation).

In general, coloured by the habitually small-scale nature of the units suggested by the settlement evidence and by the lack of indications of marked differences discernible from material culture evidence, most recent interpretations of the Early Iron Age in Scotland propose a relative lack of hierarchy in social or political terms, and small-scale, decentralised societies. In these

communities, the main signifiers of social, economic and political superiority were furnished by domestic architecture, and perhaps only very secondarily by acts of enclosure, generally not visible (with exceptions!) over great distances, and still less transportable. We may even propose that societies at this time were organised heterarchically, as has been suggested in other Iron Age contexts by Crumley and Marquardt (1987; Crumley 1995). In consequence, there may have been relatively frequent shifts in the key places in the landscapes of the country. To that extent, 'central places', in which the symbols of power, wealth and status were accumulated and displayed, may not have been a feature of the Earlier Iron Age landscapes of Scotland.

The radiocarbon evidence

In approaching the Scottish Early Iron Age, we now wish to focus on the accumulating evidence from radiocarbon dates, used here in the full knowledge of their shortcomings as a dating tool for the period under examination. Plateaux in the calibration curve between about 750 BC to 420 BC, and again from about 350 BC to 200 BC, smear out the probability distributions for calibrated ages. In effect, even with ages with 30 year error terms, this creates a chest of drawers: the lowest drawer contains samples dating before about 800 BC; the middle drawer, samples with calibrated dates indistinguishable from one another, from before 750 BC to after 420 BC; and the upper drawer, samples with dates from before 350 BC onward past the end of the millennium.

Kilian *et al.* (1995, 963–5) have argued, contrary to the previous consensus, that the calibration curve contains information very similar to that of the Holocene climatic record. This may imply a markedly wet period in north-west Europe around 800 cal. BC and presumably another around 400 cal. BC, as well as smaller ones at other periods, for instance perhaps around 200 cal. BC. It is thus conceivable that the flat periods of the calibration curve were relatively favourable to farming in Scotland. Without invoking environmental determinism, we might in due course test for the possibility of a reflection of this in the cultural record, but the dates available at present are useless for this purpose.

The start date we have preferred for pragmatic reasons related to

the shape of the calibration curve begins 50 radiocarbon years before the cut-off point of 2550 BP selected by Stuart Needham (this volume). There are presently some 333 archaeological radiocarbon determinations for Scotland with laboratory ages between 2600 and 2100 BP uncalibrated. In preparing this paper we rejected some results for reasons varying from the presence of a marine effect of unknown strength, for instance in the case of auk bones from under the Atlantic roundhouse wall at Dun Vulan, South Uist (Parker Pearson and Sharples 1999, 46; 50), to a high likelihood of residuality, for example an age derived from an early historic weaving shed at Ratho, Midlothian (Smith 1995). The rest produce results that, on calibration, wholly or partially fall within the span between 800 and 300 BC. We have given much lesser weight to the many ages that produce calibrated date ranges covering extensive periods within the developed Iron Age. But the choice of 2600 BP as our early cut-off date and the preceding steep part of the calibration curve usually avoids dates with ranges stretching deep into the prior period.

Some results come from laboratories whose error estimates for dates obtained between AD 1950 and around AD 1982 must be increased by factors between 4 and 1.4 (Baillie 1990; Ashmore *et al.* 2000a). Only 79 dates present a reasonable level of confidence that the sample truly belongs in the period from 800 to 350 cal. BC, or – in the case of some of the later ones – to that or the immediately succeeding centuries. It is worth remembering that, on purely statistical grounds, about four of these 79 samples probably have true dates outwith the 95% range expressed by the calibrated dates, but of course one cannot know which. On top of all that, there must remain some archaeological concerns about the samples dated before the merits of single entity dating were recognised (Ashmore 1999a).

<i>Age BP</i>	<i>Approximate date</i>	<i>Comments</i>
3050	1300 BC	Roughly the start of a 500 calendar year Late Bronze Age
2600	800 BC	Roughly the start of a 500 calendar year Early Iron Age

2250	300 BC	The calibration curve is very irregular here
1800	200 AD	There is a small plateau at this point

Table 1. Start and end ages BP and dates BC for the periods used here.

Provided care is taken, this apparently dispiriting core data set is, however, surprisingly useful. All the data used – warts and all – is accessible in the radiocarbon index on Historic Scotland’s web site or published in recent issues of *Discovery and Excavation in Scotland* (Ashmore 1996; 1997; 1998a; 1999b; 2000; 2001; 2002; Ashmore *et al.* 2000b). Its utility suggests that a programme of re-dating key deposits, based in each case on several single-entity high precision dates, is sorely needed. It will not help much within the plateau regions but it will allow identification of structures of around 800 and around 400 BC respectively.

Above, we have reiterated perceived views that the Early Iron Age seems to be marked by less elaboration, particularly to judge from the material culture record, than the periods that precede and follow it. Although the end dates for the Early Iron Age and the Middle Iron Age, respectively, chosen here coincide with slightly awkward parts of the calibration curve, it is possible to choose reasonable approximate ages BP corresponding to the beginnings and ends of the three periods. These ages are listed in [Table 1](#).

So, are sites attributable to this span any rarer than for the Later Bronze Age or for the Middle Iron Age, as is sometimes supposed? Some sites have had many more dates obtained for them than others. To remove this potential bias, it is best to count sites with at least one radiocarbon age in a period. If we do so for all sites – i.e. including those with radiocarbon determinations that are subject to considerable doubt as to their quality – chi-square tests lead to the conclusion that there are indeed significant differences between the three periods. Contrastingly, if one considers only the well-dated sites, it is not safe to conclude that there were any fewer sites in the Early Iron Age than there were in neighbouring periods. The number of sites falling into each of the three periods and categories is shown in [Table 2](#).

<i>Period</i>	<i>No. of sites with</i>	<i>No. of sites with</i>	<i>No. of sites with</i>
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	at least one age of any weakness	at least one age of weakness < 20	at least one age of weakness < 10
Later Bronze Age	98	68	41
Early Iron Age	109	56	36
Middle Iron Age	156	92	59

Table 2. The numbers of sites with ages of various weaknesses in each period; the scoring system is explained in the Appendix.

The conclusion is that, although there are differences in the numbers of excavated sites firmly attributed to one period or the other, those differences could happen often enough by chance if one randomly dug 136 of the sites which really date to between 1300 BC and AD 200. So we cannot safely project these differences back onto the parent population of sites, and it is not safe to say from the radiocarbon determinations obtained so far, that the observed differences reflect real variations in the number of sites belonging to each of our three periods. There may in truth have been significantly fewer Earlier Iron Age sites in Scotland than either before or after, but we have not yet obtained enough good dates from the three periods to be sure beyond reasonable doubt.

The dated samples give some insight into the way in which wood was used during the period. A few identified species occur in dated samples in sufficiently large numbers to quote meaningful percentages. Hazel was most frequently used for obtaining dates, occurring in 27% of samples. Only two of these were suspected of possibly having derived from a post because of occurring in a post hole, but even in these cases, it may have been a component of the debris that filled the post hole after the post burnt down, decayed, or was removed. Oak occurred in 20% of samples and alder in 19%. Birch was used in 14% of samples and willow in 11%, the latter often interpreted as from wattle. Heather, *Prunus*, hawthorn, Pomoideae and rowan were also used for dating samples very occasionally.

Focussing on the Early Iron Age itself, rather more site categories, as conventionally defined, appear to have been in use during this period than perhaps had been realised. Further, some categories of site long recognised, on stratigraphic and other grounds, as likely to be relatively precocious – palisades are a case in point – still have

markedly few determinations within this period. There is considerable regional variation, a conclusion in line with the results of recent detailed survey programmes, such as the Royal Commission on the Ancient and Historical Monuments of Scotland's astonishingly unsung considerations of the settlement records of eastern Dumfriesshire (RCAHMS 1997) and north-east Perthshire (RCAHMS 1990).

Patterns in the evidence

Unsurprisingly, perhaps, the radiocarbon dates are dominated numerically by samples from what are apparently domestic contexts. These include numbers of substantial and less massive houses from Orkney southward, in a variety of traditions. Roundhouses in Scotland have a pedigree going back to at least 1750 cal. BC (Terry 1995, 379–84; McCullagh and Tipping 1998, 39–40). It has been the consensus for many years that a horizon of large roundhouses should exist in our period (Mercer 1985, 73; Armit 1990, 194; Hingley 1992, 13). In this respect, it is worth noting that the set of 41 dates for houses in the core date-list includes a much higher proportion of dates from relatively small houses than does the set of 81 dates for houses from the full date-list including dates to which severe doubts about quality must be attached (Ashmore *et al.* 2000a). It seems possible that biases in preservation and in the selection of sites for excavation have led to a lack of attention to the existence of smaller roundhouses in the earlier part of our period.

The recent majority opinion in Scotland seems to be that most roundhouses were occupied for only brief periods. This perspective appears to be based on a few cases where this is indeed likely, such as Buiston crannog (Crone 2000, 64). It also assumes that a lack of contiguous midden deposits and casually discarded remains should indicate a short period of use. However, this view ignores the evidence from other sites such as Lairg, where sometimes deep anthropogenic deposits survived in a way which suggested systematic and repeated clearing out of houses (McCullagh and Tipping 1998, 46; 49); and where there was also evidence for severe anthropogenic erosion in houses in acid oxygen-rich environments, and for subsequent cultivation even inside houses (*ibid.*, 52–3). It

rests also perhaps on the indications of significant decay in the vertical posts of the experimental roundhouse at Pimperne (Reynolds 1994) within two decades of its construction, but such observations need to be qualified by the fact that that structure was neither routinely inhabited nor heated. Nor is the fact that its internal posts were no longer earth-fast a sign that it was likely imminently to collapse.

Undoubtedly some houses were short-lived, but given the survival, for instance, of sixteenth-century foundationless turf, cob and flint houses with thatched roofs still containing remnants of 450-year-old thatch at Wherwell in Hampshire (D. and C. Etchells pers. comm.), it is clear that houses which would leave little evidence of their construction and use after down-taking and one episode of ploughing can survive for centuries. It is also obvious that there is a high potential for residuality on such sites and that bulk charcoal samples may provide meaningless average dates. Another recent crystallisation of opinion emphasises the seasonal use of individual houses, at least in the uplands. We prefer here Cowley's analysis of marginality in the second and first millennia BC in the Strath of Kildonan, Sutherland, which to us implies the long-term occupation of more favourable areas, and a likely shorter-term occupation of more marginal structures (Cowley 1998; 1999).

Amongst newer dimensions of this *problématique*, the recent work at Cladh Hallan on South Uist (Parker Pearson *et al.* 2002; Selkirk 2002) has demonstrated – from an example with a sunken and, helpfully, repeatedly re-floored interior – the potentially long survival there of individual roundhouses belonging, on the radio-carbon evidence so far available, to a period only slightly earlier than ours. Half a millennium is proposed for a single building, perhaps a little optimistically. This Hebridean work also puts forward new variants on roundhouse architecture, in some instances including light internal post rings and indications of low rooflines with eaves propped onto a sand-cored outer wall, producing an external effect somewhat akin to the cellular early village structures at Jarlshof (Hamilton 1956, fig. 10), and heralding later, first millennium AD, building styles in machair sand environments. The aligned layout of the buildings on the South Uist site mirrors that in some of the upland roundhouse settlements of Perthshire (Alyth

Burn, RCAHMS 1990, 30; Drumturn Burn, *ibid.*, 45; Hill of Cally, *ibid.*, 53; Hill of Kingseat, *ibid.*, 54; Loch Beachally, *ibid.*, 60; Muir of Gormack, *ibid.*, 69).

Cellular structures as at Ceann nan Clachan, Vallay Strand on North Uist, Western Isles (Armit and Braby 2002) and from the very end of or perhaps slightly later than our period at Tungadale, in Glen Bracadale on Skye (R. Miket pers. comm.; Ashmore *et al.* 2000b GU-3808), may suggest that Bronze Age building practices played a part, however transmitted, in the development of wheelhouses. Substantially built circular structures such as Kilphedir in Sutherland (Fairhurst and Taylor 1970–1, 90) and Quanterness (Renfrew 1979, 184, 194) with smaller examples such as Alt a'Ghasgain, Sleat, Skye (Wildgoose *et al.* 1993; 1994) all lying outside the core data set, and Bu (Hedges 1987) and Pierowall in Orkney (Sharples 1984, 90) with a date amongst our core set from midden under its wall and another from occupation material, provide another component in this drystone building tradition.

East and south of the Highland massif, the comparators of the drystone roundhouses are generally substantially timber-built, and include, from just before or in our period, upland examples such as Carn Dubh, Pitlochry, Perthshire (Rideout 1995), and lowland ones such as the houses at Dryburn Bridge, Dunbar, East Lothian, at least one with a massive porch, inside a palisaded enclosure (Triscott 1982). Firmly in our period is Candle Stane, Inch, Aberdeenshire (Cameron 1999, 125). It consisted of a ring groove 15.5 m in diameter with two rings of posts inside it. That said, statistical testing suggests that the charcoal from the inner and outer rings have different radioactive signatures.

One possibility is that the two samples from the inner ring truly belong to well before 390 cal BC and the two samples from the outer rings truly belong well after 390 cal BC. Alternatively, the structure as a whole belongs to between 400 and 380 cal BC, and a combination of very minor differences in the true date of the samples; statistical fluctuations in measurement; and the very rapid increase in the amount of C14 in the atmosphere at this time have led to samples with minor calendar differences in date appearing to be truly well separated in time. Despite the cautionary example of Culhawk, where fourth millennium BC charcoal had contaminated

first millennium contexts (Rees 1998; Ashmore 1998b; 1999a), there is the exciting possibility that Candle Stane could be dated to within a 20-year period. A programme of thorough charcoal analysis and dating of several single entity samples from each context is highly desirable, because there is the potential for fixing the house in time with an unusual degree of accuracy.

Some of the houses in the unenclosed settlement at Douglasmuir, Friockheim, Angus (Kendrick 1995, 58) belong to the first part of our period, from 800 to 400 cal. BC. There are also crannogs constructed in this time frame including the marine example at Redcastle in the Beauly Firth (Hale 1996a, 139; 2000, table 1), Oakbank (Dixon 1981), and Fearnan at Kenmore in Loch Tay (Crone 1993, 246). Earlier examples are known at Carn Dubh in the Beauly Firth (Hale 1996b, 139; cf. 2000) and Milton Loch 1, Dumfries and Galloway (Guido 1974, 55; Morrison 1981a; 1981b). There are possibly only slightly later ones at Ederline in Loch Awe, and Loch Arthur, Nithsdale (Crone 1993). Some of these early substantial houses are now recorded from areas not previously known to exhibit the tradition: Kirsty Cameron's excavation of the one adjacent to the Candle Stane, a recumbent stone circle, in Aberdeenshire may stand as an example. Whilst Kendrick (1995, 61–3) is right to point to the variability present within the class of ring-ditch houses, echoed by further excavations, as at Forest Road, Kintore, Aberdeenshire (M. Cook pers. comm.), they remain perhaps the most coherent timber-built variant of such structures that should generally be identifiable in the air photographic record, albeit now extending chronologically outwith the span considered here.

It remains of course true that some of the buildings with broad ring ditches may have been byres for small cattle, as has been suggested, very tentatively, for one of those at Douglasmuir (Kendrick 1995, 61–2), their locations fitting into patterns of the exploitation of both lowland and upland pasture, for both lowland pastoralism and transhumance seem wholly possible within societies operating in these environments. One noticeable trend apparent in the data originally considered by Hill (1982a, appendix 1) was, however, that the more extensive ring-ditch house settlements seemed to be further from stream courses than their smaller

equivalent. Given the need cattle have for water, this may introduce a problem for the byre interpretation.

Despite this reservation, the time has perhaps come to react against the thoroughness of the readjustment against Piggott's (1958) footloose Celtic cowboys. Strat Halliday (1993) has judiciously pointed out both that some of the high altitude cord-rigging encountered, for example in the Cheviots, may be indicative of pretty marginal cultivation systems; and that Scottish livestock – cattle, sheep, maybe at least some goats – probably contributed to the decline of woodland and concurrent extension of grassland that was underway during the Earlier Iron Age.

As a gross generalisation to which there are exceptions – as at Dryburn Bridge and in open settlements at Cyderhall near Dornoch in Sutherland (Pollock 1992) with a souterrain, Douglasmuir in Angus (Kendrick 1995), and Deer's Den near Kintore in Aberdeenshire (Alexander 2000, illus 4) with four-posters – known Earlier Iron Age substantial houses are not usually found with identifiable storage structures of normal forms. We accept, however, that some four-posters may have had other functions, not least as porches of buildings otherwise eliminated from the record by subsequent attrition, as Guilbert (1981) argued for Moel y Gaer. Quantifying the proportional reliance on stock raising on Earlier Iron Age farms is not presently feasible, but in many Scottish environments it is likely to have been a significant activity.

What is perhaps less commonly appreciated is that a sub-rectangular building is dated to the plateau between 400 and 200 BC at An Dunan, Uig, Western Isles (Gilmour and Church 1999, 115). One structure is not perhaps enough in itself to suggest a real link with the sub-rectangular buildings of the first millennium AD, and it may be that this example is in truth from the developed Iron Age; but it illustrates the diversity of building styles already noted by others from the second half of the first millennium BC and the first millennium AD (Cowley 1999, 67–9).

Some dates refer directly to enclosures on hill- or promontory forts, or derive from internal features that may or may not be contemporary with enclosing works on such sites. Many of these dates were obtained during the heroic early days of the application of radiocarbon dating to later Scottish prehistory, in the important

work then conducted by Euan MacKie, the late Alan Small and others. The generalisation of particular traits assumed to be geographically widespread on the radiocarbon evidence so far accumulated is thus to be avoided at this stage, not least in the full knowledge of how hard it has proved to dislodge that useful heuristic device, the Hownam sequence (cf. Armit 1999), from its seeming wide applicability as the paradigm for southeastern Scottish settlement sequences.

A few trends can be picked out, none the less. An obvious one is that there is, in present circumstances, no single chronological horizon for the enclosure of the big forts of Scotland. Isotopic dates of course remain few, and excavation samples generally diminutive. Whilst the earliest of the roundhouse platforms within Eildon Hill North, Scottish Borders (Owen 1992), thus belongs before the mid first millennium BC, the fortifications themselves remain undated, although the outermost triple circuit, A (RCAHMS 1956, fig. 417; Owen 1992) – or at least components of it – may date to the Late Bronze Age, or relatively shortly thereafter. Both the extent of this putatively early multiple enclosure, and the presence of post holes for vertical timbers probably for revetting beneath the one bank so far examined at Eildon, are unusual in the Scottish context, but far from unacceptable at a relatively precocious date.

A wall face containing vertical timbers set in individual posts – again, a non-standard style of architecture within Scotland – succeeds the palisaded phase on the early coastal promontory fort at Cullykhan, now in Aberdeenshire (Greig 1972); more extensive rampart cuttings may produce further instances of the use of upright posts in years to come. Although there are two relevant dates from the fully-excavated Broxmouth fort, on the East Lothian coastal plain near Dunbar, one probably indicates use of heartwood from a long-lived tree and the other, from animal bone in weathered soil sealed between rampart rebuilds, may reflect a period of rampart disuse as easily as a time of strength. Scotland may however share a trait with areas of northern temperate Europe – more particularly the former German Democratic Republic – where some locally big and seemingly sparsely occupied hillforts have long been recognised as a Late Bronze Age phenomenon (Herrmann 1989).

Contrastingly, the proposed early summit palisade line on Traprain Law has not been confirmed by the recent work there. Of the other big once-upon-a-time 'minor *oppida*' (Feachem 1966), George Jobey's early work (1978) on the palisade and succeeding enclosure on Burnswark at the foot of Annandale seems still the best claimant as a precocious sizeable (several hectare) later prehistoric enclosure. In Angus, the Brown Caterthun has produced radiocarbon dates which suggest rampart building at some time between 800 and 400 BC; the downslope expansion of this unusual, multiple-entrance, hilltop enclosure occurs over time from the Late Bronze Age/Early Iron Age onward, with the construction of its main enclosure lines lying wholly within the pre-Roman Iron Age (Dunwell and Strachan forthcoming). Only the much slighter innermost bank – enveloping but unrelated to a pit containing quantities of grain dated just after 800 BC – may not conform to the sequence of expansion of the enclosed area through time.

Numbers of smaller Scottish hillforts were certainly in use during the Earlier Iron Age. Apart from the inner components of the Brown Caterthun, examples include Gillies Hill near Stirling (Rideout 1992); the earlier phases of Broxmouth, near Dunbar; Balloch Hill in lowland Kintyre (despite the poor quality of the dates which has led to their rejection from our table in the Appendix; Peltenburg 1982); and north to the Lewis promontory fort at Gob Eirer. At least some of the gateless oblong, and frequently heavily-vitrified forts, primarily of north-east Scotland, but present on the west coast as far north as Dun Lagaidh (MacKie 1976), may also belong to the Earlier Iron Age, despite the disparate set of radiocarbon dates for them. The biggest example, marked by the presence of a very ruinous outer defence, like the principal circuit also vitrified, is Dunagoil on Bute. It yielded some extraordinary finds from Marshall's excavation early last century – both rich and numerous for the restricted volume of work conducted (Mann 1915), and now housed in Rothesay Museum.

Dunagoil, strategically set within the Firth of Clyde, is worth drawing attention to, given the primarily southern, eastern and mainland focus of Scottish hillfort research. This highly unusual series of vitrified forts, so distinctive in their form, and so redolent of symbolism in the fiery spectacles that must have marked their

destruction (Ralston 1986), throw into high relief all our problems with dating. In essence, there are three competing chronologies: from the thermoluminescence work of David Sanderson and collaborators (1988); Doug Gentles' application of archaeomagnetism (1993); and the several hands concerned with the accumulation of radiocarbon dates associated with them. Derek Alexander (2002) rehearses the dating problems with regard to the well-known site at Finavon in Angus. Numbers of the radiocarbon dates suggest that a Late Bronze Age/Early Iron Age horizon is possible for what is surely still a good claimant as a relatively narrow cultural tradition of building. It has to be noted, however, that the thermoluminescence suggests widely disparate dates for these sites; but if the archaeomagnetic dates, which appear much more chronologically coherent, are to that extent more believable, then these sites would belong primarily rather later within the pre-Roman Iron Age than the period here considered.

There is a perhaps surprising number of dates close to our period of interest, from a variety of contexts associated with funerary or ritual practices. Some fall fairly certainly earlier. Cremation is still represented shortly before the outset, at least among the small series of dated kerb cairns from Argyll and Aberdeenshire (Ralston and Sabine 2000). Trevor Watkins' site at Rullion Green on the Pentland edge in Midlothian also demonstrates that small ring ditches with funerary remains (again cremations) are present in the period just before the Earlier Iron Age. And at least some of the unaccompanied inhumations from East Lothian, like those in pits beyond Broxmouth's enclosure (Hill 1982b; Ashmore and Hill 1983), could belong before or on the cusp of our nominal cut-off date at 300 BC, as could inhumations from cemeteries at Kirkhill and Kingsbarns (James 2001) in Fife – the first in pits, the second from a young woman in a crouched position in a collapsed short cist – demonstrating that this ritual was not restricted to the Lothians.

Only more precise dates than those presently available could resolve the question, although the suspicion must be that the centre of our metaphorical hammock still does not hold any known formal burials. It does however include less formal disposals of corpses: the most unusual addendum to this set of data in recent years has come from a programme of dating the inhumations within MacArthur's

Cave, Oban, Argyll (Saville and Hallén 1994), best known for its Mesolithic material. There, human bone belongs in both the earlier and the later parts of our period. An apparently casual disposal of human remains from at least two individuals at the settlement site at the Howe in Orkney also lies firmly in the hammock (Ballin Smith 1994, 260). Perhaps we are in fact able to settle on the length of the period during which formal burials are rare in Scotland as lasting about 20 to 25 generations from about 800 to about 300 BC? That the single cart burial from the country, from Newbridge, Midlothian (Carter and Hunter 2003), should fall into this span perhaps emphasises the exceptional character of that find. And how can we interpret that find in terms of sharing of beliefs with, or an absence of effective contact with, or a purposeful separateness from, the beliefs of continental societies? It does not support Simon James' suggestion that there was substantial identity in practices between the people of the Late Bronze Age and the developed Iron Age in Atlantic Europe, although it leaves untouched his argument that a continued use of roundhouses is significant (James 1999, 88).

As the constituent parts of the European Iron Age become more fully studied and its internal chronology better fixed, it may be suggested that two trends are apparent. One is that, whatever broad-scale cultural labels may be attached, regional and chronological variations are increasingly recognised as constant features of the material record. The second is that the archaeological indicators on the barometer of the comparative levels of political, social or economic complexity point frequently to social change. For some twenty years, syntheses in which the big blocks of time amount to a couple of, or at most three, centuries have become the norm – from Wells' (1984) treatment to Kristiansen's (1998) overview. The same seems broadly true of southern Britain. Other phenomena appear to have been much more transitory in terms of their chronological survival, perhaps most celebrated the 'princely seats' and related features of the Late Hallstatt world, described in a recent book as an 'epiphenomenon' (Brun and Chaume 1997).

Conclusions

It would be premature to suggest that this very preliminary reading

of the accumulating information from Scotland over the half millennium from about 800 BC points unequivocally to the occurrence of detectable social and political changes, whether temporary or more permanent, over the kinds of timescales presented above. Regional variation is certainly widely attested; but we need to allow for the possibility of more frequent social changes, that are unlikely to have been unidirectional, and that should in due course be detectable from the record. It will need the application of more than radiocarbon dating – archaeomagnetic or refinements of optically stimulated luminescence perhaps – to bring such oscillations into clearer focus.

We would contend that the available data do contain indications of communal action and of change on physically rather grander scales than the substantially localised ones of household and community on which Hingley's (1992) overview usefully focussed. The very different vegetation record for lowland inland Aberdeenshire from that suggested in southern Scotland is one pointer. Other indications come from Catherine McGill's doctoral research on the pottery from eastern Scottish sites, material which is, if not copiously represented, much more plentiful than we had appreciated. As in other domains, separating Late Bronze Age from Early Iron Age is problematic, but McGill's work suggests a number of broader-scale variations in this material (McGill in preparation). In general, Borders hillforts produce few forms amongst their pottery, even when – in Scottish terms – assemblages are of a reasonable size: Traprain remains the conspicuous exception to this rule. The range of pottery forms is particularly restricted on hillforts and other enclosed sites in the south-east – for example Dryburn Bridge and Broxmouth.

Contrastingly, the patterning of the evidence changes, north and west of Midlothian, and especially north of the Tay, where on some sites pottery forms are more varied. Sites either unenclosed or lightly enclosed, and with substantial houses, such as Scotstarvit, Myrehead, and upland Perthshire sites like Dalnaglar and Dalrulzion fall into this category. Overall McGill has identified some 35 forms, with richer assemblages displaying about ten of these (*ibid.*). A further suite of sites, with rather different assemblages, occurs from Aberdeenshire (at sites like Deer's Den, Kintore and Barra Hill) to

Moray. And material is yet more common and more variable on Moray Firth promontory sites such as Cullykhan – with clear evidence of enclosure in the Early Iron Age – and Green Castle, Portknockie, probably with a palisade at this time.

The important question that faces us is whether we are beginning to see glimpses of a rather wider patterning superimposed on social structures where the local dimension has for long seemed to dominate in the record. We suspect that this may be the case.

Appendix: Things dated reasonably well to the period 800 to 350 cal. BC

P.J. Ashmore

There are 382 radiocarbon ages between 2600 and 2100 BP for Scottish archaeological material. They are each somewhere between excellent and awful. I have used a method here, which attempts to govern the wilfulness of choice of which dates to use.

Each radiocarbon age has been given a score for Age Weakness (that is to say, irrespective of Contextual Weakness, dealt with separately below) based on information readily available to me about the sample and its measurement. Some of the ages may thus have been judged harshly because not all recorded information is easily available. Four factors were scored independently:

- whether it was single-entity, as a proxy for whether it might be material of mixed age (score between 0 = good and 5 = bad)
- whether its species was identified, which was taken partly as a proxy for good examination of the material before it was dated (score between 0 = identified, 5 = material only, and 10 = not even the material dated was clear)
- whether it was measured when techniques were not as good as they are now (score between 0 = after 1985, and 15 = before 1980)
- the time that may have elapsed between the last incorporation

of carbon from the atmosphere in the sample and the death of the organism which provided it, important for charcoal which may have come from old heartwood (score between 0 and 15 = possibly up to 500 years old).

These scores were added up. A technically excellent age had a score of 0 and an unusable one had a score of 45. The total score was divided by 4.5 and reduced to the nearest lower integer, so every date had an Age Weakness score between 0 (excellent) and 10 (unusable). An Age Weakness score above 2 then led to rejection of the age from the list below. This choice of break-point was based on examination of the results for all 382 ages: an Age Weakness of 3 included many results which seemed to me unacceptably poor while an Age Weakness of 2 seemed to include few ages likely to be badly wrong. It must be emphasised that this choice was subjective. It is very difficult to express its consequences in terms of radiocarbon years, or of calendar years due to the wiggles of the radiocarbon curve, but subjectively I do not think that many of the remaining dates are wrong by more than two or three generations over and above any wrongness arising from statistical uncertainties.

In the database, technical problems were scored separately. Ages that had, for instance, suffered from contamination during measurement, such as some of those from Hoddum, were excluded. After examination, all five remaining dates with adjusted errors greater than 110 were also excluded because their calibrated ages were too vague to be even slightly useful.

Most ages related to several different things. For example, the age might have been taken from a single well-preserved carbonised twig, and its relevance to the age of that twig is immediately obvious. And if the carbonised twig was in a pit in a fort, a score for the Contextual Weakness could be given to each relationship, between 0 (for instance the twig itself in the example above) and 10 (the fort). A reasonably good relationship such as that between the date of the twig and date of the pit was given a score of 4. Had the twig in the example above been a lump of charcoal, the Contextual Weakness of the age in relationship to the pit would have been 6, as a loose *TPQ*. All contextual relationships with a Contextual Weakness greater than 4 were excluded.

Contextual relationships with particular species of tree (birch,

hazel, oak etc.) were omitted as not particularly interesting, because an analysis had shown that there was little variation through the period. As noted in the text, hazel, oak, alder, birch, and willow were the species most often used for dating.

There remain 132 ages relating to 258 contextual relationships. These latter form the rows in the list that follows. This is therefore a compilation of the things reasonably well dated to the period, with their dates, not simply a table of dates. It is ordered by Tag, a simple descriptor of the thing to which the date relates, and then by Site.

Tag	Site	Reference	Material of sample	Code	Contextual weakness	Age weakness	Calibrated date	Adjusted age	Adjusted error	dl 1 σ
artifact (figurine)	Ballachulish, Lochaber	Christison 1880-81; Coles 1990, 320, 326	wood	HAR-6329	0	0	700 to 410 cal BC	2490	70	
artifact (axe-marked wood)	Dal na Caraidh, Fort William	Barrett and Goudry 1999	wood	GU-2185	0	1	770 to 400 cal BC	2440	60	-25
artifact (spaddle)	Ravenstone Moss	Sheridan 1997b	wood	OsA-6815	2	2	780 to 400 cal BC	2470	55	-24.5
artifact (wooden bowl and trough)	Somomay, River Arnd, Lewis	Earwood 1993	wood	OsA-3012	0	2	800 to 290 cal BC	2370	90	
barley	An Doman, Uig	Gilmour and Church 1999, 115	charred grain	OsA-8479	0	0	360 to 50 cal BC	2145	40	-23.4
barley	An Doman, Uig	Gilmour and Church 1999, 115	charred grain	OsA-8480	0	0	400 to 200 cal BC	2250	35	-23.8
barley	An Doman, Uig	Gilmour and Church 1999, 115	charred grain	OsA-8575	0	0	360 to 50 cal BC	2155	45	-24.6
barley	An Doman, Uig	Gilmour and Church 1999, 115	charred grain	OsA-8577	0	0	400 to 170 cal BC	2230	50	-25.1
barley	An Doman, Uig	Gilmour and Church 1999, 115	charred grain	OsA-8613	0	0	360 to 50 cal BC	2165	40	-21.7
barley	Begann, Yell	inf. H. Moore	charred grain	OsA-9898	0	0	410 to 290 BC	2300	38	-22.33
barley	Brown Caterburn	Dunwell 1999, 111	charred grain	OsA-8037	0	0	800 to 510 cal BC	2520	35	-23.2
barley	Brown Caterburn	Dunwell 1999, 111	charred grain	OsA-8038	0	0	790 to 410 cal BC	2495	45	-24.3
barley	Brown Caterburn	Dunwell 1999, 111	charred grain	OsA-8039	0	0	810 to 510 cal BC	2535	40	-23.4
barley	Brown Caterburn	Dunwell 1999, 111	charred grain	OsA-8062	0	0	800 to 410 cal BC	2500	40	-24.5
barley	Coann Nan Chathan, Vallay Strand, N Uist	Armit and Braby 2002, 252	charred grain	OsA-9831	0	0	770 to 410 BC	2469	37	-24.18
barley	Coann Nan Chathan, Vallay Strand, N Uist	Armit and Braby 2002, 252	charred grain	OsA-9969	0	0	780 to 400 BC	2475	50	-24.4
barley	Coann Nan Chathan, Vallay Strand, N Uist	Armit and Braby 2002, 252	charred grain	OsA-9970	0	0	800 to 290 BC	2360	50	-25.31
barley	Cydelhall, Domoch	Pollock 1992, 157	charred grain	GU-2633	2	1	400 to 170 cal BC	2220	50	-25.3
barley	Dun Velea, S Uist	Parker Pearson and Sharples 1999, 50, 58, 211	charred grain	AA-22916	0	0	770 to 400 cal BC	2435	50	
barley	Fisher's Road West, Port Seton	Haselgrove and McCullagh 2000, 28	charred grain	AA-19635	1	1	360 cal BC to 0 cal AD	2135	55	-23.5
barley	Fisher's Road West, Port Seton	Haselgrove and McCullagh 2000, 28	charred grain	AA-19636	1	0	800 to 150 cal BC	2330	80	-23.5
barley	Fisher's Road West, Port Seton	Haselgrove and McCullagh 2000, 28	charred grain	AA-19639	1	1	360 cal BC to 20 cal AD	2110	55	-22.1
barley	Fisher's Road West, Port Seton	Haselgrove and McCullagh 2000, 28	charred grain	AA-19643	1	1	380 cal BC to 60 cal AD	2110	80	-24.5
barley	Gob Eimer, Uig	Gilmour and Church 1999, 115	charred grain	OsA-8459	0	0	770 to 410 cal BC	2470	50	-24.3
barley	Gob Eimer, Uig	Gilmour and Church 1999, 115	charred grain	OsA-8466	0	0	840 to 520 cal BC	2580	50	-23.7
barley	Gob Eimer, Uig	Gilmour and Church 1999, 115	charred grain	OsA-8573	0	0	770 to 400 cal BC	2465	50	-24.4
barley	Rosebank, Kintore Bypass	Alexander 2000, 64	charred grain	OsA-8126	0	0	370 to 110 cal BC	2175	35	-23
brooch	Crosskirk	Faithurst 1984, 164-165	leaves	SRR-266	2	2	800 to 200 cal BC	2380	110	-26.8
burial	Broommouth, Dunbar	Ashmore and Hill 1983, 94	bone, human	GU-1130	0	2	800 to 0 cal BC	2255	110	-19.9
burial	Broommouth, Dunbar	Ashmore and Hill 1983, 94	bone, human	GU-1139	0	1	410 cal BC to 80 cal AD	2155	110	-20.3
burial	Broommouth, Dunbar	Ashmore and Hill 1983, 94	bone, human	GU-1140	0	1	800 to 0 cal BC	2270	110	-20.7
burial	Broommouth, Dunbar	Ashmore and Hill 1983, 94	bone, human	GU-1141	0	1	410 cal BC to 80 cal AD	2160	110	-20.6
burial	Broommouth, Dunbar	Ashmore and Hill 1983, 94	bone, human	GU-1144	0	1	550 cal BC to 100 cal AD	2200	110	-20.5

Tag	Site	Reference	Material of sample	Code	Contextual weakness	Age weakness	Calibrated date	Adjusted age	Adjusted error	d t/c
burial	Broomouth, Dunbar	Ashmore and Hill 1983, 94	bone, human	GU-1146	0	2	400 cal BC to 70 cal AD	2145	110	-20.4
burial	Dryburn Bridge, Dunbar	Triscott 1982	bone, human	GU-1149	0	1	550 cal BC to 100 cal AD	2210	110	-21.5
burial	Dryburn Bridge, Dunbar	Triscott 1982	bone, human	GU-1410	0	1	800 to 200 cal BC	2415	110	-20.9
burial	Hove, Stromness	Bullin Smith 1994, 264-6	bone, human	GU-1799	0	0	770 to 170 cal BC	2380	50	-20
burial	Kingsham	James 2001, 20-4	bone, human	GU-8219	0	0	410 to 160 BC	2250	60	-20.3
burial	Kirkhill, St Andrews	Wordsworth and Clark 1997, 13	bone, human	GU-1680	0	0	550 to 150 cal BC	2290	65	-21
burial	MacArthur Cave, Oban	Saville and Hallen 1994, 720	bone, human	Ox-A4485	0	0	380 to 50 cal BC	2170	55	-21.4
burial	MacArthur Cave, Oban	Saville and Hallen 1994, 720	bone, human	Ox-A4486	0	0	800 to 200 cal BC	2365	55	-21.3
burial	MacArthur Cave, Oban	Saville and Hallen 1994, 720	bone, human	Ox-A4487	0	0	770 to 400 cal BC	2460	55	-21.9
burial	MacArthur Cave, Oban	Saville and Hallen 1994, 720	bone, human	Ox-A4488	0	0	520 to 170 cal BC	2295	60	-22.3
cattle	Bk, Naveroney Stromness	Hedges 1987	bone, animal	GU-1152	0	1	850 to 200 cal BC	2440	110	-21.1
cattle	Chalk Hallan	Palmer Pearson 1996, 142; 2002	bone, animal	AA-17477	0	0	800 to 150 cal BC	2240	65	-22.1
cattle	Phenowall Quarry, Westray	Sharpley 1984, 90	bone, animal	GU-1580	0	0	800 to 410 cal BC	2510	80	-20
cattle	Phenowall Quarry, Westray	Sharpley 1984, 90	bone, animal	GU-1581	0	0	770 to 390 cal BC	2425	60	-20
cattle	Silgencath	inf. N. Sharpley	bone, animal	Ox-A8880	0	0	760 to 380 cal BC	2385	40	-20.4
cattle	Silgencath	inf. N. Sharpley	bone, animal	Ox-A8881	0	0	790 to 410 cal BC	2485	40	-20.5
cattle	Silgencath	inf. N. Sharpley	bone, animal	Ox-A8922	0	0	790 to 410 cal BC	2485	40	-20.419
cattle	Silgencath	inf. N. Sharpley	bone, animal	Ox-A8923	0	0	760 to 290 cal BC	2410	40	-20.602
cattle	St Boniface, Papa Westray	Lowie 1998, 84	bone, animal	AA-9565	4	1	360 cal BC to 20 cal AD	2115	60	-20.6
cave	Inchmarnock Site 16A	inf. C. Lowe	charred hazel nut-shell	AA-39966	4	0	350 to 40 cal BC	2110	35	-24.0
cemetary	Broomouth, Dunbar	Ashmore and Hill 1983, 94	bone, human	GU-1138	2	2	800 to 0 cal BC	2255	110	-19.9
cemetary	Broomouth, Dunbar	Ashmore and Hill 1983, 94	bone, human	GU-1139	2	1	410 cal BC to 80 cal AD	2155	110	-20.3
cemetary	Broomouth, Dunbar	Ashmore and Hill 1983, 94	bone, human	GU-1141	4	1	410 cal BC to 80 cal AD	2160	110	-20.6
cemetary	Broomouth, Dunbar	Ashmore and Hill 1983, 94	bone, human	GU-1146	4	2	400 cal BC to 70 cal AD	2145	110	-20.4
cemetary	Kirkhill, St Andrews	Wordsworth and Clark 1997, 13	bone, human	GU-1680	2	0	550 to 150 cal BC	2290	65	-21
cemetary	Broomouth, Dunbar	Ashmore and Hill 1983, 94	bone, human	GU-1138	2	2	800 to 0 cal BC	2255	110	-19.9
cist	Broomouth, Dunbar	Ashmore and Hill 1984, 94	bone, human	GU-1139	2	1	410 cal BC to 80 cal AD	2155	110	-20.3
cist	Broomouth, Dunbar	Ashmore and Hill 1983, 94	bone, human	GU-1141	2	1	410 cal BC to 80 cal AD	2160	110	-20.6
cist	Broomouth, Dunbar	Ashmore and Hill 1983, 94	bone, human	GU-1144	2	1	550 cal BC to 100 cal AD	2290	110	-20.5
cist	Broomouth, Dunbar	Ashmore and Hill 1983, 94	bone, human	GU-1146	2	2	400 cal BC to 70 cal AD	2145	110	-20.4
cist	Kingsham	James 2001, 20-4	bone, human	GU-8219	2	0	410 to 160 BC	2250	60	-20.3
cist	Kirkhill, St Andrews	Wordsworth and Clark 1997, 13	bone, human	GU-1680	2	0	550 to 150 cal BC	2290	65	-21
crannog	Cam Dabh, Beaulie Firth	Hale 1996, 139	wood	GU-4540	2	0	810 to 410 cal BC	2530	50	-25.3
crannog	Elkies Burn, Loch Frisa, Mull	Holley and Robson 1999	wood	Bea-78832	2	0	400 to 80 cal BC	2290	50	-28
crannog	Erskine Bridge	inf. W. Hanson	wood	GU-2186	2	1	400 to 120 cal BC	2210	50	-25.8
crannog	Erskine Bridge	inf. W. Hanson; Crone 1993b, 246	wood	GU-2383	2	2	380 to 50 cal BC	2170	60	-28
crannog	Loch Arthur, Nithsdale	Crone 1993b, 246	wood	GU-2643	2	2	400 to 200 cal BC	2260	50	-28
crannog	Loch Arthur, Nithsdale	Crone 1993b, 246	wood	GU-2644	2	2	410 to 160 cal BC	2240	60	-28.5
crannog	Loch Tay, Ferman Hotel, Kenmore	Crone 1993b, 246	Wood	GU-1322	2	2	850 to 250 cal BC	2475	110	-25.6

Tag	Site	Reference	Material of sample	Code	Contextual weakness	Age weakness	Calibrated date	Adjusted age	Adjusted error	d t/c
crannog	Loch Tay, Ferman, Kenmore	Dixon 1981, 346-7	wood	GU-1323	2	0	900 to 400 cal BC	2545	110	-25.9
crannog	Loch Tay, Ferman, Kenmore	Dixon 1981, 346-7	wood	GU-1325	2	2	800 to 200 cal BC	2410	110	-25.8
crannog	Loch Tay, Oubank, Kenmore	Dixon 1981, 346-7	wood	GU-3468	4	2	790 to 410 cal BC	2490	50	-26
crannog	Loch Tay, Oubank, Kenmore	Dixon 1981, 346-7	wood	GU-3469	2	2	830 to 510 cal BC	2560	50	-28.8
crannog	Loch Tay, Oubank, Kenmore	Dixon 1981, 346-7	wood	GU-3470	2	2	800 to 410 cal BC	2510	50	-28.4
crannog	Loch Tay, Oubank, Kenmore	Dixon 1981, 346-7	wood	GU-3471	2	2	790 to 410 cal BC	2490	50	-28.3
crannog	Loch Tay, Oubank, Kenmore	Dixon 1981, 346-7	wood	GU-3472	2	2	770 to 400 cal BC	2450	50	-24.2
crannog	Redcastle, Beaulie Firth	Hale 1996a, 139	leather	AA-21248	2	0	400 to 90 cal BC	2220	70	-27.9
crannog	Redcastle, Beaulie Firth	Hale 1996a, 39	wood	Bea-48763	4	2	380 to 40 cal BC	2150	60	-27
crannog	Redcastle, Beaulie Firth	Hale 1995, 44	wood	GU-4094	2	1	520 to 200 cal BC	2310	50	-27.3
crannog	Redcastle, Beaulie Firth	Hale 1995, 44	wood	GU-4095	2	1	800 to 200 cal BC	2330	50	-27.1
crannog	Redcastle, Beaulie Firth	Hale 1995, 44	wood	GU-4097	2	2	780 to 410 cal BC	2480	50	-27
crannog	Redcastle, Beaulie Firth	Hale 1996a, 139	wood	GU-4541	4	1	800 to 410 cal BC	2510	50	-27
crannog	Redcastle, Beaulie Firth	Hale 1996a, 139	wood	GU-4542	4	1	830 to 520 cal BC	2570	50	-26.8
crannog	Redcastle, Beaulie Firth	Hale 1996a, 139	wood	GU-4543	2	1	820 to 410 cal BC	2550	50	-27.8
ditch	Britiswold, Bonyngton	Crone and O'Sullivan 1997, 394	seeds	AA-18521	2	0	390 to 90 cal BC	2190	60	-22.4
ditch	Fisher's Road East, Port Seton	Hasdgrove and McCullagh 2000, 127-128	seeds	AA-25730	4	1	840 to 540 cal BC	2590	45	-22.2
ditch	Fisher's Road West, Port Seton	Hasdgrove and McCullagh 2000, 28	charred grain	AA-19635	4	1	360 cal BC to 0 cal AD	2135	55	-23.5
ditch	Fisher's Road West, Port Seton	Hasdgrove and McCullagh 2000, 28	charred grain	AA-19636	4	0	800 to 150 cal BC	2330	80	-23.5
ditch	Fisher's Road West, Port Seton	Hasdgrove and McCullagh 2000, 28	charred grain	AA-19638	4	1	360 cal BC to 30 cal AD	2105	55	-23.4
ditch	Fisher's Road West, Port Seton	Hasdgrove and McCullagh 2000, 28	charred grain	AA-19639	4	1	360 cal BC to 20 cal AD	2110	55	-22.1
ditch	Fisher's Road West, Port Seton	Hasdgrove and McCullagh 2000, 28	wood	AA-19641	4	2	400 to 50 cal BC	2204	75	-33.0
ditch, crescentic enclosure	Deer's Den, Kintyre Bypass	Alexander 2009, 64	charcoal	Ox-A8174	4	0	820 to 520 cal BC	2560	40	-26.2
enclosure	Britiswold, Bonyngton	Crone and O'Sullivan 1997, 394	seeds	AA-18521	2	0	390 to 90 cal BC	2190	60	-22.4
enclosure	Fisher's Road East, Port Seton	Hasdgrove and McCullagh 2000, 127-128	seeds	AA-25730	4	1	840 to 540 cal BC	2590	45	-22.2
enclosure	Fisher's Road West, Port Seton	Hasdgrove and McCullagh 2000, 28	charred grain	AA-19635	4	1	360 cal BC to 0 cal AD	2135	55	-23.5
enclosure	Fisher's Road West, Port Seton	Hasdgrove and McCullagh 2000, 28	charred grain	AA-19636	4	0	800 to 150 cal BC	2330	80	-23.5
enclosure	Fisher's Road West, Port Seton	Hasdgrove and McCullagh 2000, 28	charred grain	AA-19638	4	1	360 cal BC to 30 cal AD	2105	55	-23.4
enclosure	Fisher's Road West, Port Seton	Hasdgrove and McCullagh 2000, 28	charred grain	AA-19639	4	1	360 cal BC to 20 cal AD	2110	55	-22.1
enclosure	Fisher's Road West, Port Seton	Hasdgrove and McCullagh 2000, 28	wood	AA-19641	4	2	400 to 50 cal BC	2204	75	-33.0
enclosure	Fisher's Road West, Port Seton	Hasdgrove and McCullagh 2000, 28	charred grain	AA-19643	4	1	380 cal BC to 60 cal AD	2110	80	-24.5
enclosure	North Maids, Strathallan	Barclay and Tolan 1990, 50-3	charcoal	GU-2081	2	1	390 to 110 cal BC	2200	50	-24.3
fort	Brown Caterburn	Dunwell and Strachan 1996, 136	charcoal	GU-4599	2	1	800 to 250 cal BC	2370	50	-26.6
fort	Brown Caterburn	Dunwell and Strachan 1996, 136	charcoal	GU-4600	2	1	800 to 200 cal BC	2360	60	-26.2
fort	Brown Caterburn	Dunwell and Strachan 1996, 136	charcoal	GU-4601	2	1	410 to 160 cal BC	2250	60	-26.9
fort	Brown Caterburn	Dunwell and Strachan 1996, 136	charcoal	GU-4602	2	1	770 to 400 cal BC	2450	50	-25.9
fort	Brown Caterburn	Dunwell and Strachan 1996, 136	charcoal	GU-4603	4	1	770 to 400 cal BC	2440	50	-27.5
fort	Brown Caterburn	Dunwell and Strachan 1996, 136	charcoal	GU-4604	2	1	780 to 410 cal BC	2480	50	-27
fort	Brown Caterburn	Dunwell and Strachan 1998, 125	charcoal	GU-7322	2	0	520 to 200 cal BC	2310	50	-26.1

Tag	Site	Reference	Material of sample	Code	Contextual weakness	Age weakness	Calibrated date	Adjusted age	Adjusted error	d11c
fort	Brown Caterburn	Dunwell and Strachan 1998, 125	charcoal	GU-7323	2	0	770 to 570 cal BC	2380	50	-26.2
fort	Brown Caterburn	Dunwell 1999, 111	charred grain	OsA-8037	4	0	800 to 510 cal BC	2520	35	-23.2
fort	Brown Caterburn	Dunwell 1999, 111	charred grain	OsA-8038	4	0	790 to 410 cal BC	2495	45	-24.3
fort	Brown Caterburn	Dunwell 1999, 111	charred grain	OsA-8039	4	0	810 to 510 cal BC	2535	40	-23.4
fort	Brown Caterburn	Dunwell 1999, 111	charred grain	OsA-8062	4	0	800 to 410 cal BC	2560	40	-24.5
fort	Broomouth, Dunbar	Ashmore and Hill 1983, 94	bone, human	GU-1144	4	1	550 cal BC to 100 cal AD	2280	110	-20.5
fort	Broomouth, Dunbar	Hill 1982a, 1982b; Ashmore and Hill 1983, 94	charcoal	GU-1201	2	1	850 to 250 cal BC	2470	110	-25
fort	Broomouth, Dunbar	Hill 1982a, 1982b	charcoal	GU-1225	2	2	800 to 0 cal BC	2250	110	-25.1
four-post setting	Gallies Hill, Cambusharron	Ridout 1929, 132-3	charcoal	GU-1911	4	1	550 to 200 cal BC	2310	55	-26.8
	Dce's Den, Kilmorie Bypass	Alexander 2009, 64	charcoal	OsA-8102	4	0	800 to 410 cal BC	2520	40	-26.6
Cyderhall, Dornoch		Pollock 1992, 157	charred grain	GU-2633	0	1	400 to 170 cal BC	2220	50	-22.3
grain	Homish Point, S Uist	inf. J. Barber	charred grain	GU-2550	0	0	390 to 0 cal BC	2160	80	-23.9
grain	Kebister, Lerwick	Owen and Lowe 1999, 138-47	charred grain	Uic-1146	2	1	500 cal BC to 50 cal AD	2200	100	-26.4
grain	Kebister, Lerwick	Owen and Lowe 1999, 138-47	charred grain	Uic-1147	2	0	380 cal BC cal BC to 10 cal AD	2130	70	-24.7
grave	Broomouth, Dunbar	Ashmore and Hill 1983, 94	bone, human	GU-1138	2	2	800 to 0 cal BC	2255	110	-19.9
grave	Broomouth, Dunbar	Ashmore and Hill 1983, 94	bone, human	GU-1139	2	1	410 cal BC to 80 cal AD	2155	110	-20.3
grave	Broomouth, Dunbar	Ashmore and Hill 1983, 94	bone, human	GU-1141	2	1	410 cal BC to 80 cal AD	2160	110	-20.6
grave	Broomouth, Dunbar	Ashmore and Hill 1983, 94	bone, human	GU-1144	2	1	550 cal BC to 100 cal AD	2200	110	-20.5
grave	Broomouth, Dunbar	Ashmore and Hill 1983, 94	bone, human	GU-1146	2	2	400 cal BC to 70 cal AD	2145	110	-20.4
grave	Drybarn Bridge, Dunbar	Triscoret 1982	bone, human	GU-1149	2	1	550 cal BC to 100 cal AD	2210	110	-21.5
igly	Cyderhall, Dornoch	Pollock 1992, 155	charcoal	GU-2630	2	1	800 to 200 cal BC	2320	50	-24.8
hearth	An Dnan, Uig	Gilmour and Church 1999, 115	charred hazel nutshell	OsA-8478	2	0	390 to 170 cal BC	2215	40	-22.8
hearth	An Dnan, Uig	Gilmour and Church 1999, 115	charred grain	OsA-8479	4	0	360 to 50 cal BC	2145	40	-23.4
hearth	An Dnan, Uig	Gilmour and Church 1999, 115	charred grain	OsA-8480	4	0	400 to 200 cal BC	2220	35	-23.8
hearth	An Dnan, Uig	Gilmour and Church 1999, 115	charred grain	OsA-8575	4	0	360 to 50 cal BC	2155	45	-24.6
hearth	An Dnan, Uig	Gilmour and Church 1999, 115	charred grain	OsA-8577	4	0	400 to 170 cal BC	2230	50	-25.1
hearth	An Dnan, Uig	Gilmour and Church 1999, 115	charred grain	OsA-8613	4	0	360 to 90 cal BC	2165	40	-21.7
hearth	Howe, Stromness	Balin Smith 1994, 264-6	bone, animal	GU-2343	4	2	380 cal BC cal BC to 20 cal AD	2130	80	-22.4
hearth	Kebister, Lerwick	Owen and Lowe 1999, 138-47	charred grain	Uic-1146	4	1	500 cal BC to 50 cal AD	2200	100	-26.4
hearth	Kebister, Lerwick	Owen and Lowe 1999, 138-47	charred grain	Uic-1147	4	0	380 cal BC cal BC to 10 cal AD	2130	70	-24.7
house	An Dnan, Uig	Gilmour and Church 1999, 115	charred hazel nutshell	OsA-8478	2	0	390 to 170 cal BC	2215	40	-22.8
house	An Dnan, Uig	Gilmour and Church 1999, 115	charred grain	OsA-8479	4	0	360 to 50 cal BC	2145	40	-23.4
house	An Dnan, Uig	Gilmour and Church 1999, 115	charred grain	OsA-8480	4	0	400 to 200 cal BC	2220	35	-23.8
house	An Dnan, Uig	Gilmour and Church 1999, 115	charred grain	OsA-8575	4	0	360 to 50 cal BC	2155	45	-24.6
house	An Dnan, Uig	Gilmour and Church 1999, 115	charred grain	OsA-8577	4	0	400 to 170 cal BC	2230	50	-25.1

Tag	Site	Reference	Material of sample	Code	Contextual weakness	Age weakness	Calibrated date	Adjusted age	Adjusted error	d11c
house	An Dnan, Uig	Gilmour and Church 1999, 115	charred grain	OsA-8613	4	0	360 to 50 cal BC	2145	40	-21.7
house	Bu, Naverough Stromness	Hedges 1987	bone, animal	GU-1152	2	1	850 to 200 cal BC	2440	110	-21.1
house	Bu, Naverough Stromness	Hedges 1987	bone, animal	GU-1153	4	2	900 to 400 cal BC	2545	110	-21.4
house	Bu, Naverough Stromness	Hedges 1987	bone, animal	GU-1154	4	2	850 to 250 cal BC	2460	110	-21.5
house	Candle Stane, Insh	Cameron 1999, 367-368	charcoal	AA-28369	2	0	400 to 180 cal BC	2245	50	-25.6
house	Candle Stane, Insh	Cameron 1999, 367-368	charcoal	AA-28370	2	1	770 to 370 cal BC	2380	50	-25.2
house	Candle Stane, Insh	Cameron 1999, 367-368	charcoal	AA-28371	2	1	400 to 200 cal BC	2260	50	-25
house	Candle Stane, Insh	Cameron 1999, 367-368	charcoal	AA-28372	2	0	770 to 390 cal BC	2420	70	-25.4
house	Candle Stane, Insh	Cameron 1999, 367-368	charcoal	AA-28373	2	1	770 to 380 cal BC	2395	50	-25.4
house	Clyth Hallan	Parker Pearson 1996, 142, 2002	bone, animal	AA-17477	2	0	800 to 150 cal BC	2310	65	-22.1
house	Cyderhall, Dornoch	Pollock 1992, 155	charcoal	GU-2630	2	1	800 to 200 cal BC	2340	60	-25.3
house	Cyderhall, Dornoch	Pollock 1992, 155	charcoal	GU-2650	2	1	800 to 200 cal BC	2330	50	-24.8
house	Douglasmar, Frischheim	Kendrick 1995, 58	charcoal	GU-1468	4	2	840 to 380 cal BC	2495	110	-24.7
house	Douglasmar, Frischheim	Kendrick 1995, 58	charcoal	GU-1471	4	2	800 to 200 cal BC	2400	110	-24.3
house	Drybarn Bridge, Dunbar	Triscoret 1982	wood	GU-1257	2	2	850 to 200 cal BC	2450	110	-25
house	Drybarn Bridge, Dunbar	Triscoret 1982	charcoal	GU-1283	2	2	800 to 50 cal BC	2280	110	-25
house	Ealdon Hill North, Melrose	Owen 1992, 56-80	charcoal	GU-2192	4	2	400 to 110 cal BC	2220	60	-24.8
house	Greerjards, Bannockburn	Ridout 1996, 249-250	charcoal	GU-1655	4	1	770 to 400 cal BC	2445	60	-25
house	Howe, Stromness	Balin Smith 1994, 264-6	bone, animal	GU-2343	4	2	380 cal BC to 20 cal AD	2130	80	-22.4
house	Romnacamp Gate, Frischheim	Bailey 1993, 261-2	charcoal	GU-3102	4	1	360 cal BC to 10 cal AD	2110	50	-26
house	Tungahale, Glen Breacdale Skye	inf. R. Mäket	charcoal	GU-3808	4	2	800 to 150 cal BC	2310	70	-26.7
house	Tungahale, Glen Breacdale Skye	inf. R. Mäket	charcoal	GU-3810	4	2	400 cal BC to 50 cal AD	2150	100	
house?	Dce's Den, Kilmorie Bypass	Alexander 2009, 64	charcoal	OsA-8174	4	0	820 to 520 cal BC	2560	40	-26.2
leather	Redcastle, Beaulieu Finis	Hale 1996a, 139	leather	AA-21248	0	0	400 to 90 cal BC	2220	70	-27.9
midken	Bay of Moaness, Rosnay	Edwards 2000	bone, animal	OsA-9013	2	0	770 to 400 cal BC	2445	45	-20.882
midken	Bayane, Yell	inf. H. Moore	charred grain	OsA-9898	4	0	410 to 200 BC	2300	38	-22.33
midken	Dan Vahan, S Uist	Parker Pearson and Sharples 1999, 50, 58, 211	charred hazel nutshell	AA-22916	4	0	770 to 400 cal BC	2435	50	
midken	East Wemyss	Guttmann 2002, 118	shell	GU-2716	0	1	800 to 200 cal BC	2365	65	1.7
midken	Homish Point, S Uist	inf. J. Barber	charred grain	GU-2550	4	0	390 to 0 cal BC	2160	80	-23.9
midken	Howe, Stromness	Balin Smith 1994, 264-6	bone, animal	GU-1804	4	1	770 to 390 cal BC	2420	55	-21.2
midken	Inchmarnock Site 16B	inf. C. Lowe	charred hazel nutshell	AA-39967	4	0	360 to 50 BC	2150	35	-25.1
midken	Pierowall Quarry, Westray	Sharples 1984, 90	bone, animal	GU-1580	4	0	800 to 410 cal BC	2510	80	-20
midken	Silgetach	inf. N. Sharples	bone, animal	OsA-8880	2	0	760 to 380 cal BC	2385	40	-20.4
midken	Silgetach	inf. N. Sharples	bone, animal	OsA-8881	4	0	790 to 410 cal BC	2485	40	-20.5
midken	Silgetach	inf. N. Sharples	bone, animal	OsA-8922	4	0	790 to 410 cal BC	2465	40	-20.419
midken	Silgetach	inf. N. Sharples	bone, animal	OsA-8923	0	0	760 to 390 cal BC	2410	40	-20.602
midken	Silgetach	inf. N. Sharples	bone, animal	OsA-8924	4	0	800 to 200 cal BC	2340	55	-21.217

Tag	Site	Reference	Material of sample	Code	Contextual weakness	Age weakness	Calibrated date	Adjusted age	Adjusted error	d11c
midken	St Boniface, Papa Westray	Lowie 1998, 84	bone, animal	AA-9565	4	1	360 cal BC to 20 cal AD	2115	60	-20.6
midken	Tolfts Ness, Sanday	Dockrill <i>et al.</i> forthcoming	bone, animal	GU-2208	2	1	770 to 410 cal BC	2470	50	-21.4
peat	Calanais Fields, Lewis	inf. K. Flincoft	peat	Ox-A-10091	2	2	390 to 180 BC	2222	37	-28.68
peat	Calanais Fields, Lewis	inf. K. Flincoft	peat	Ox-A-10120	2	2	760 to 380 BC	2380	40	-20.94
peat	Tolfts Ness, Sanday	Dockrill <i>et al.</i> forthcoming	peat	GU-2185	2	2	770 to 410 cal BC	2290	50	-27.9
peat basal	Dal na Carraigh, Fort William	Burton and Goudry 1999	wood	GU-2185	4	1	770 to 400 cal BC	2440	60	-25
pit	Brown Cateburn	Dunwell 1999, 111	charred grain	Ox-A-8037	2	0	800 to 510 cal BC	2520	35	-23.2
pit	Brown Cateburn	Dunwell 1999, 111	charred grain	Ox-A-8038	2	0	700 to 410 cal BC	2495	45	-24.3
pit	Brown Cateburn	Dunwell 1999, 111	charred grain	Ox-A-8039	2	0	810 to 510 cal BC	2535	40	-23.4
pit	Brown Cateburn	Dunwell 1999, 111	charred grain	Ox-A-8062	2	0	800 to 410 cal BC	2500	40	-24.5
pit	Broommouth, Dunbar	Ashmore and Hill 1983, 94	bone, human	GU-1140	2	1	800 to 0 cal BC	2270	110	-26.7
pit	Cydehall, Dornoch	Pollock 1992, 157	charred grain	GU-2633	2	1	400 to 170 cal BC	2220	50	-25.3
pit	Dryburn Bridge, Dunbar	Triscott 1982	bone, human	GU-1410	2	1	800 to 200 cal BC	2415	110	-20.9
pit	Greergrays, Bannockburn	Ridout 1996, 240-250	charcoal	GU-1656	2	2	410 to 170 cal BC	2255	60	-25
pit	London Hill	Atkinson 1996, 137	charcoal	GU-4537	4	2	360 cal BC to 10 cal AD	2120	60	-25.2
pit	Rodeadale, Beaulie Firth	Hale 1996a, 139	leather	AA-21248	4	0	400 to 90 cal BC	2220	70	-27.9
pit	Rosbank, Kintore Bypass	Alexander 2000, 64	charred grain	Ox-A-8126	4	0	370 to 0 cal BC	2175	35	-23
platform	Eldon Hill North, Melrose	Owen 1992, 56-80	charcoal	GU-2192	4	2	400 to 110 cal BC	2220	60	-24.8
Pondisae	Eldon Hill North, Melrose	Owen 1992, 56-80	charcoal	GU-2192	4	2	400 to 110 cal BC	2220	60	-24.8
posthole	Cydehall, Dornoch	Pollock 1992, 155	charcoal	GU-2650	2	1	800 to 200 cal BC	2330	50	-24.8
posthole	Greergrays, Bannockburn	Ridout 1996, 240-250	charcoal	GU-1655	4	1	770 to 400 cal BC	2445	60	-25
posthole	Laing Watching Bield, Laing	McCallagh 1997, 114	charcoal	AA-20222	4	1	800 to 200 cal BC	2325	60	-24.8
posthole	North Mains, Strathallan	Buckley and Triggs 1990, 50-3	charcoal	GU-2801	2	1	300 to 110 cal BC	2260	50	-24.3
pot	Chalk Halls	Parker Pearson 1996, 142; 2002	bone, animal	AA-17477	2	0	800 to 150 cal BC	2310	65	-22.1
pot	Dun Vulan, S. Uist	Parker Pearson and Sharples 1999, 50, 58, 211	charred grain	AA-22916	4	0	770 to 400 cal BC	2435	50	
pot	Silgensch	inf. N. Sharples	bone, animal	Ox-A-8922	4	0	700 to 410 cal BC	2485	40	-20.419
Prunus	Eldon Hill North, Melrose	Owen 1992, 56-80	charcoal	GU-2192	4	2	400 to 110 cal BC	2220	60	-24.8
rampart	Brown Cateburn	Dunwell and Strachan 1996, 136	charcoal	GU-4599	2	1	800 to 250 cal BC	2370	50	-26.6
rampart	Brown Cateburn	Dunwell and Strachan 1996, 136	charcoal	GU-4600	2	1	800 to 200 cal BC	2360	60	-26.2
rampart	Brown Cateburn	Dunwell and Strachan 1996, 136	charcoal	GU-4601	2	1	410 to 160 cal BC	2250	60	-26.9
rampart	Brown Cateburn	Dunwell and Strachan 1996, 136	charcoal	GU-4602	2	1	770 to 400 cal BC	2450	50	-25.9
rampart	Brown Cateburn	Dunwell and Strachan 1996, 136	charcoal	GU-4603	4	1	770 to 400 cal BC	2440	50	-27.5
rampart	Brown Cateburn	Dunwell and Strachan 1996, 136	charcoal	GU-4604	2	1	780 to 410 cal BC	2480	50	-27
rampart	Brown Cateburn	Dunwell and Strachan 1996, 125	charcoal	GU-5122	2	0	520 to 200 cal BC	2310	50	-26.1
rampart	Brown Cateburn	Dunwell and Strachan 1996, 125	charcoal	GU-5123	2	0	770 to 270 cal BC	2380	50	-26.2
rampart	Broommouth, Dunbar	Hill 1982a, 1982b; Ashmore and Hill 1983, 94	charcoal	GU-1201	2	1	850 to 250 cal BC	2470	110	-25
rampart	Broommouth, Dunbar	Hill 1982a, 1982b	charcoal	GU-1225	2	2	800 to 0 cal BC	2250	110	-25.1
rampart	Fisher's Road West, Port Seton	Haslegrave and McCullagh 2000, 28	charred grain	AA-19643	4	1	380 cal BC to 60 cal AD	2110	80	-24.5
red deer	Bar of Monzie, Rosny	Edwards 2001	bone, animal	Ox-A-9013	0	0	770 to 400 cal BC	2445	45	-20.882

Tag	Site	Reference	Material of sample	Code	Contextual weakness	Age weakness	Calibrated date	Adjusted age	Adjusted error	d11c
red deer	Silgensch	inf. N. Sharples	bone, animal	Ox-A-8924	0	0	800 to 200 cal BC	2340	55	-21.217
ring cairn	Balmoran of Clava	Bradley 2000	charcoal	AA-25229	4	0	770 to 390 cal BC	2420	45	-26.5
ring ditch	Deer's Den, Kintore Bypass	Alexander 2000, 64	charcoal	Ox-A-8174	4	0	820 to 520 cal BC	2560	40	-26.2
ring ditch	Douglamuir, Frieschheim	Kendrick 1995, 58	charcoal	GU-1471	2	2	800 to 200 cal BC	2400	110	-24.3
ring ditch	Ironshill, Inverchord	Pollock 1997, 350	charcoal	GU-1982	4	1	800 to 200 cal BC	2340	50	-25.6
roundhouse	Bu, Naversough Stronness	Hedges 1987	bone, animal	GU-1152	2	1	850 to 200 cal BC	2440	110	-21.1
roundhouse	Bu, Naversough Stronness	Hedges 1987	bone, animal	GU-1153	4	2	900 to 400 cal BC	2545	110	-21.4
roundhouse	Bu, Naversough Stronness	Hedges 1987	bone, animal	GU-1154	4	2	850 to 250 cal BC	2460	110	-21.5
roundhouse	Canlie Stane, Inch	Cameron 1999, 367-368	charcoal	AA-28369	2	0	400 to 180 cal BC	2245	50	-25.6
roundhouse	Canlie Stane, Inch	Cameron 1999, 367-368	charcoal	AA-28370	2	1	770 to 370 cal BC	2380	50	-25.2
roundhouse	Canlie Stane, Inch	Cameron 1999, 367-368	charcoal	AA-28371	2	1	400 to 200 cal BC	2260	50	-25
roundhouse	Canlie Stane, Inch	Cameron 1999, 367-368	charcoal	AA-28372	2	0	770 to 390 cal BC	2420	70	-25.4
roundhouse	Canlie Stane, Inch	Cameron 1999, 367-368	charcoal	AA-28373	2	0	770 to 380 cal BC	2395	50	-25.4
roundhouse	Crosskiln	Fairhurst 1984, 164-165	leaves	SRR 266	2	2	800 to 200 cal BC	2380	110	-26.8
roundhouse	Cydehall, Dornoch	Pollock 1992, 155	charcoal	GU-2630	2	1	800 to 200 cal BC	2340	60	-25.3
roundhouse	Cydehall, Dornoch	Pollock 1992, 155	charcoal	GU-2650	2	1	800 to 200 cal BC	2330	50	-24.8
roundhouse	Douglamuir, Frieschheim	Kendrick 1995, 58	charcoal	GU-1468	4	2	840 to 380 cal BC	2495	110	-24.7
roundhouse	Douglamuir, Frieschheim	Kendrick 1995, 58	charcoal	GU-1471	4	2	800 to 200 cal BC	2400	110	-24.3
roundhouse	Dryburn Bridge, Dunbar	Triscott 1982	wood	GU-1257	2	2	850 to 200 cal BC	2450	110	-25
roundhouse	Greergrays, Bannockburn	Ridout 1996, 240-250	charcoal	GU-1655	4	1	770 to 400 cal BC	2445	60	-25
roundhouse	Hova, Stronness	Balby Smith 1994, 264-6	bone, human	GU-729	4	0	770 to 270 cal BC	2340	60	-29
roundhouse	London	Lowie 1992, 127	charcoal	GU-2541	4	2	410 to 200 cal BC	2270	50	-25
sheep	St Boniface, Papa Westray	Lowie 1998, 84	bone, animal	AA-9565	4	1	360 cal BC to 20 cal AD	2115	60	-20.6
shell	East Wemyss	Guttmann 2002, 118	shell	GU-2716	0	1	800 to 200 cal BC	2365	65	1.7
shell midden	East Wemyss	Guttmann 2002, 118	shell	GU-2716	0	1	800 to 200 cal BC	2365	65	1.7
shell midden	St Boniface, Papa Westray	Lowie 1998, 84	bone, animal	AA-9565	4	1	360 cal BC to 20 cal AD	2115	60	-20.6
soil	Africau to Kinsaid Site 8	Hillday 2001	charcoal	AA-4069	0	0	410 to 0 cal BC	2290	45	-29
soil	Balmoran of Clava	Bradley 2000	charcoal	AA-25229	4	0	770 to 390 cal BC	2420	45	-26.5
southern	Bu, Naversough Stronness	Hedges 1987	bone, animal	GU-1153	4	2	900 to 400 cal BC	2545	110	-21.4
structure	Cann Nan Chathan, Valley Strand, N. Uist	Armit and Bealy 2002, 252	charred grain	Ox-A-9831	2	0	770 to 410 BC	2469	37	-24.18
structure	Cann Nan Chathan, Valley Strand, N. Uist	Armit and Bealy 2002, 252	charred grain	Ox-A-9969	2	0	780 to 400 BC	2475	50	-24.4
structure	Cann Nan Chathan, Valley Strand, N. Uist	Armit and Bealy 2002, 252	charred grain	Ox-A-9970	2	0	800 to 200 BC	2360	50	-25.31
trough	Stomoway, River Arnel, Lewis	Earwood 1993	wood	Ox-A-3012	0	2	800 to 200 cal BC	2370	90	
wheat	Fisher's Road West, Port Seton	Haslegrave and McCullagh 2000, 28	charred grain	AA-19638	1	1	360 cal BC to 30 cal AD	2105	55	-23.4
winkle	East Wemyss	Guttmann 2002, 118	shell	GU-2716	0	1	800 to 200 cal BC	2365	65	1.7
wooden bowl	Stomoway, River Arnel, Lewis	Earwood 1993	wood	Ox-A-3012	0	2	800 to 200 cal BC	2370	90	

Bibliography

Alcock, L. 1987. Pictish studies: present and future, in A. Small (ed.), *The Picts: a New Look at Old Problems*, 80-92. Dundee: University of Dundee.

Alexander, D.L. 2000. Excavation of Neolithic pits, later prehistoric structures and a Roman temporary camp along the line of the A96 Kintore and Blackburn bypass, Aberdeenshire, *Proceedings of the Society*

of *Antiquaries of Scotland* 130, 11–75.

- Alexander, D.L. 2002. An oblong fort at Finavon, Angus: an example of the over-reliance on the appliance of science, in B. Ballin Smith and I. Banks (eds), *In the Shadow of the Brochs*, 45–54. Stroud: Tempus.
- Armit, I. 1990. Epilogue: the Atlantic Scottish Iron Age, in I. Armit (ed.), *Beyond the Brochs: Changing Perspectives on the Atlantic Scottish Iron Age*, 194–210. Edinburgh: Edinburgh University Press.
- Armit, I. 1997. *Celtic Scotland*. London: Batsford.
- Armit, I. 1999. Life after Hownam: the Iron Age in south-east Scotland, in B. Bevan (ed.), *Northern Exposure: Interpretative Devolution and the Iron Ages in Britain*, 65–79. Leicester: Leicester Archaeology Monograph 4.
- Armit, I. and Braby, A. 2002. Excavation of a burnt mound and associated structures at Ceann nan Clachan, North Uist, *Proceedings of the Society of Antiquaries of Scotland* 132, 229–58.
- Ashmore, P. J. (ed.) 1996. A list of Historic Scotland Archaeological Radiocarbon Dates, *Discovery and Excavation in Scotland* 1996, 136–142.
- Ashmore, P.J. (ed.) 1997. A list of Historic Scotland Archaeological Radiocarbon Dates, *Discovery and Excavation in Scotland* 1997, 112–117.
- Ashmore, P.J. (ed.) 1998a. A list of Archaeological Radiocarbon Dates, *Discovery and Excavation in Scotland* 1998, 125–128.
- Ashmore, P.J. 1998b. Single Entity Dating, *Actes du colloque «C14 Archéologie»*, 1998, 65–71.
- Ashmore, P. J. 1999a. Radiocarbon dating: avoiding errors in dating by avoiding mixed samples, *Antiquity* 73, 124–130.
- Ashmore, P.J. (ed.) 1999b. A list of Archaeological Radiocarbon Dates, *Discovery and Excavation in Scotland* 1999, 110–115.
- Ashmore, P.J. (ed.) 2000. A list of Archaeological Radiocarbon Dates, *Discovery and Excavation in Scotland* (NS) 1, 122–128.
- Ashmore, P.J. (ed.) 2001. A list of Archaeological Radiocarbon Dates, *Discovery and Excavation in Scotland* (NS) 2, 122–128.
- Ashmore, P.J. (ed.) 2002. A list of Archaeological Radiocarbon Dates, *Discovery and Excavation in Scotland* (NS) 3, 142–153.
- Ashmore, P.J., Cook G.T. and Harkness D.D. 2000a. A radiocarbon database for Scottish archaeological samples, *Radiocarbon* 42, 41–48.
- Ashmore, P.J., Cook G.T. and Harkness D.D. 2000b. *Radiocarbon dates for archaeological sites in Scotland issued before June 1996*, <http://www.historic-scotland.gov.uk/Edinburgh>: Historic Scotland.
- Ashmore, P.J. and Hill, P.H. 1983. Broxmouth and high-precision dating, in B.S. Ottaway (ed.), *Archaeology, Dendrochronology and the Radiocarbon Calibration Curve*, 83–98. Edinburgh: University of Edinburgh Department of Archaeology Occasional Paper 9.

- Atkinson, J. 1996. Loudoun Hill, Ayrshire, *Discovery and Excavation in Scotland* 1996, 137.
- Baillie, M.J.L. 1990. Checking back on an assemblage of published radiocarbon dates, *Radiocarbon* 32, 361–366.
- Ballin Smith, B. (ed.) 1994. *Howe: Four Millennia of Orkney Prehistory*. Edinburgh: Society of Antiquaries of Scotland Monograph 9.
- Barclay, G.J. 1993. The excavation of pit circles at Romancamp Gate, Fochabers, Moray, *Proceedings of the Society of Antiquaries of Scotland* 123, 255–268.
- Barclay, G.J. and Tolan, M. 1990. Trial excavation of a terrace-edge enclosure at North Mains, Strathallan, Perthshire, *Proceedings of the Society of Antiquaries of Scotland* 120, 45–53.
- Barrett, J.C. and Gourlay, R.B. 1999. An early metal assemblage from Dail na Caraidh, Inverness-shire, and its context, *Proceedings of the Society of Antiquaries of Scotland* 129, 161–188.
- Bradley, R. 2000. *The Good Stones: a New Investigation of the Clava Cairns*. Edinburgh: Society of Antiquaries of Scotland Monograph 17.
- Brun, P. and Chaume, B. (eds) 1997. *Vix et les éphémères principautés celtiques. Les VI^e–Ve siècles avant J.-C. en Europe centre-occidentale*. Paris: Éditions Errance.
- Burgess, C.B. 1974. The Bronze Age, in C. Renfrew (ed.), *British Prehistory: a New Outline*, 165–232. London: Duckworth.
- Cameron, K. 1999. Excavation of an Iron Age timber structure beside the Candle Stane recumbent stone circle, Aberdeenshire, *Proceedings of the Society of Antiquaries of Scotland* 129, 359–372.
- Carter, S. and Hunter, F. 2003. An Iron Age chariot burial from Scotland, *Antiquity* 77, 531–536.
- Christison, R. 1880–81. On an ancient Wooden Image, found in November last, at Ballachulish Peat Moss, *Proceedings of the Society of Antiquaries of Scotland* 15, 158–178.
- Coles, B. 1990. Anthropomorphic wooden figurines from Britain and Ireland, *Proceedings of the Prehistoric Society* 56, 320–332.
- Cowley, D.C. 1998. Identifying marginality in the first and second millennia BC in the Strath of Kildonan, Sutherland, in C.M. Mills and G. Coles (eds), *Life on the Edge: Human Settlement and Marginality (Symposium of the Association for Environmental Archaeology 13)*, 165–170. Oxford: Oxbow Books.
- Cowley, D.C. 1999. Squaring the circle: domestic architecture in later prehistoric Sutherland and Caithness, in P. Frodsham, P. Topping and D. Cowley (eds), *'We were always chasing time': Papers presented to Keith Blood*, 67–75. Newcastle: Northern Archaeology 17/18.

- Crone, B.A. 1993. Crannogs and chronologies, *Proceedings of the Society of Antiquaries of Scotland* 123, 245–254.
- Crone, B.A. 2000. *The History of a Scottish Lowland Crannog: Excavations at Buiston, Ayrshire 1989–90*. Edinburgh: Scottish Trust for Archaeological Research Monograph 4.
- Crone, B.A. and O'Sullivan, J. 1997. Excavation of a cropmark enclosure at Brixwold (Dalhousie Mains), Bonnyrigg, Midlothian, *Proceedings of the Society of Antiquaries of Scotland* 127, 387–405.
- Crumley, C.L. 1995. Heterarchy and the analysis of complex societies, in R.M. Ehrenreich, C.L. Crumley, and J.E. Levy (eds), *Heterarchy and the Analysis of Complex Societies*, 1–5. Washington: Archaeological Papers of the American Anthropological Association 6.
- Crumley, C.L. and Marquardt, W.H. 1987. Regional dynamics in Burgundy, in C.L. Crumley and W.H. Marquardt (eds), *Regional Dynamics: Burgundian Landscapes in Historical Perspective*, 609–623. San Diego and London: Academic Press.
- Dixon, T.N. 1981. Radiocarbon dates for crannogs in Loch Tay, *International Journal of Nautical Archaeology and Underwater Exploration* 15, 346–347.
- Dockrill, S.J., Bond, J.M., Nicholson, R.A. and Smith, A.N. (eds) forthcoming. *Investigations on Sanday Vol. II. The Tofts Ness Peninsula*.
- Dunwell, A. 1999. Brown Caterthun, *Discovery and Excavation in Scotland* 1999, 111.
- Dunwell, A. and Strachan, R.J. 1996. Brown Caterthun, *Discovery and Excavation in Scotland* 1996, 136.
- Dunwell, A. and Strachan, R.J. forthcoming. *Excavations at the Caterthuns Forts, Angus*. Perth: Tayside and Fife Archaeology Committee Monograph.
- Earwood, C. 1993. The dating of wooden troughs and dishes, *Proceedings of the Society of Antiquaries of Scotland* 123, 355–362.
- Edwards, K. 2000. Bay of Moaness, Rousay, *Discovery and Excavation in Scotland* 2000, 124.
- Fairhurst, H. 1984. *Excavations at Crosskirk Broch, Caithness*. Edinburgh: Society of Antiquaries of Scotland Monograph 3.
- Fairhurst, H. and Taylor, D.B. 1970–1. A hut-circle settlement at Kilphedir, Sutherland, *Proceedings of the Society of Antiquaries of Scotland* 103, 65–99.
- Feachem, R. 1966. The Hill-Forts of Northern Britain, in A.L.F. Rivet (ed.), *The Iron Age in Northern Britain*, 59–87. Edinburgh: Edinburgh University Press.
- Gentles, D. 1993. Vitrified forts, *Current Archaeology* 133, 18–20.
- Gilmour, S. and Church, M. 1999. Uig landscape survey – Gob Eirer,

Discovery and Excavation in Scotland 1999, 115.

Greig, J.C. 1972. Cullykhan, *Current Archaeology* 32, 227–231.

Guido, M. 1974. A Scottish crannog re-dated, *Antiquity* 48, 54–56.

Guilbert, G. C. 1981. Double-ring roundhouses, probable and possible, in prehistoric Britain, *Proceedings of the Prehistoric Society* 47, 299–317.

Guttman, E. 2002. Time and tide at East Wemyss; excavations on the foreshore 1980–1995, *Tayside and Fife Archaeological Journal* 8, 111–124.

Hale, A.G.C. 1994. Redcastle (Killearnan parish): intertidal crannog, *Discovery and Excavation in Scotland* 1994, 39.

Hale A.G.C. 1995. Redcastle (Killearnan parish): intertidal crannog, *Discovery and Excavation in Scotland* 1995, 44.

Hale A.G.C. 1996a. Redcastle Fish Trap, Beaully Firth, *Discovery and Excavation in Scotland* 1996, 139.

Hale A.G.C. 1996b. Carn Dubh, Beaully Firth, *Discovery and Excavation in Scotland* 1996, 139.

Hale, A.G.C. 2000. Marine crannogs: previous work and recent surveys, *Proceedings of the Society of Antiquaries of Scotland* 130, 537–558.

Halliday, S.P. 1993. Marginal agriculture in Scotland, in T.C. Smout (ed.), *Scotland since Prehistory: Natural Change and Human Impact*, 64–78. Aberdeen: Scottish Cultural Press.

Halliday, S.P. 2001. Arisaig to Kinsadel Site 8, *Discovery and Excavation in Scotland* (NS) 2, 124.

Hamilton, J.R.C. 1956. *Excavations at Jarlshof, Shetland*. Edinburgh: HMSO, Ministry of Works Archaeological Reports 1.

Harding, D.W. (ed.) 1982. *Later Prehistoric Settlement in South-east Scotland*. Edinburgh: University of Edinburgh Department of Archaeology Occasional Paper 8.

Haselgrove, C. and McCullagh, R. 2000. *An Iron Age Coastal Community in East Lothian: the Excavation of two Later Prehistoric Enclosure Complexes at Fishers Road, Port Seton, 1994–5*. Edinburgh: Scottish Trust for Archaeological Research Monograph 6.

Hedges, J.W. 1987. *Bu, Gurness and the Brochs of Orkney. Part I, Bu*. Oxford: British Archaeological Reports British Series 163.

Herrmann, J. 1989. Burgen und befestigte Siedlungen der jüngeren Bronzezeit und frühen Eisenzeit, in J. Herrmann (ed.), *Archäologie in der Deutschen Demokratischen Republik* 1, 106–118. Stuttgart: Konrad Theiss Verlag.

Hill, P.H. 1982a. Settlement and chronology, in Harding 1982, 4–43.

Hill, P.H. 1982b. Broxmouth hillfort excavations 1978–1982: an interim report, in Harding 1982, 141–188.

- Hingley, R. 1992. Society in Scotland from 700 BC to AD 200, *Proceedings of the Society of Antiquaries of Scotland* 122, 7–53.
- Hingley, R. 1998. *Settlement and Sacrifice*. Edinburgh: Canongate Books.
- Holley, M.W. and Ralston, I.B.M. 1995. Radiocarbon dates for two crannogs on the Isle of Mull, Strathclyde Region, Scotland, *Antiquity* 69, 595–596.
- James, H. 2001. Excavations at Kingsbarns, Fife, in 1997–8: an Iron Age short cist burial, prehistoric pits, and a buried eighteenth century bridge within the designed landscape of Cambo, *Tayside and Fife Archaeological Journal* 7, 16–27.
- James, S. 1999. *The Atlantic Celts: Ancient People or Modern Invention?* London: British Museum Press.
- Jobey, G. 1978. Burnswark Hill, *Transactions of the Dumfriesshire and Galloway Natural History and Antiquarian Society* 53, 57–104.
- Jope, E.M. 2000. *Early Celtic Art in the British Isles*. Oxford: Clarendon Press.
- Kendrick, J. 1995. Excavation of a Neolithic enclosure and an Iron Age settlement at Douglasmuir, Angus, *Proceedings of the Society of Antiquaries of Scotland* 125, 29–67.
- Kilian M.R., Van der Plicht, J. and Van Geel, B. 1995. Dating raised bogs: new aspects of AMS wiggle matching, a reservoir effect and climatic change, *Quaternary Science Reviews* 14, 959–966.
- Kristiansen, K. 1998. *Europe before History*. Cambridge: Cambridge University Press.
- Lowe, C.E. 1992. The excavation of plough-truncated features at Loanleven, Perthshire, *Proceedings of the Society of Antiquaries of Scotland* 122, 127–136.
- Lowe, C.E. 1998. *Coastal Erosion and the Archaeological Assessment of an Eroding Shoreline at St Boniface Church, Papa Westray, Orkney*. Stroud: Sutton.
- MacKie, E.W. 1976. The vitrified forts of Scotland, in D.W. Harding (ed.), *Hillforts: Later Prehistoric Earthworks in Britain and Ireland*, 205–235. London: Academic Press.
- McCullagh, R. 1997. Lairg Watching Brief, Lairg, *Discovery and Excavation in Scotland* 1997, 114.
- McCullagh, R. and Tipping, R. (eds) 1998. *The Lairg Project 1988–1996. The Evolution of an Archaeological Landscape in Northern Scotland*. Edinburgh: Scottish Trust for Archaeological Research Monograph 3.
- McGill, C.E. in preparation. *The Prosaic Material Culture of Non-Atlantic Scotland South of the Moray Firth in Later Prehistory*. Unpublished Ph.D. thesis, University of Edinburgh.
- Mann, L.M. 1915. Report on the relics discovered during excavations in 1913 in the cave at Dunagoil, Bute and in 1914 in the fort of Dunagoil,

- Bute, *Transactions of the Buteshire Natural History Society* 8, 61–86.
- Mercer, R.J. 1985. *Archaeological Field Survey in Northern Scotland*, Vol. III, 1982–83. Edinburgh: University of Edinburgh Department of Archaeology Occasional Paper 11.
- Morrison, I.A. 1981a. The extension of the chronology of the crannogs of Scotland, *International Journal of Nautical Archaeology and Underwater Exploration* 10, 344–346.
- Morrison, I.A. 1981b. The crannog off Ederline, Loch Awe, Argyll, *International Journal of Nautical Archaeology and Underwater Exploration* 10, 347–349.
- Owen, O.A. 1992. Eildon Hill North, in Rideout *et al.* 1992, 21–71.
- Owen, O.A. and Lowe, C. 1999. *Kebister: The Four-thousand-year-old Story of one Shetland Township*. Edinburgh: Society of Antiquaries of Scotland Monograph 14.
- Parker Pearson, M. 1996. Cladh Hallan, *Discovery and Excavation in Scotland* 1996, 142.
- Parker Pearson, M. 2002. Cladh Hallan, *Discovery and Excavation in Scotland* (NS) 3, 151–152.
- Parker Pearson, M., Mulville, J. and Smith, H. 2002. Cladh Hallan (South Uist Parish), *Discovery and Excavation in Scotland* (NS) 3, 121–122.
- Parker Pearson, M. and Sharples, N. 1999. *Between Land and Sea: Excavations at Dun Vulan, South Uist*. Sheffield: Sheffield Academic Press.
- Peltenburg, E. 1982. Balloch Hill, Argyll, *Proceedings of the Society of Antiquaries of Scotland* 112, 142–214.
- Piggott, S. 1958. Native economies and the Roman occupation of North Britain, in I.A. Richmond (ed.), *Roman and Native in North Britain*, 1–27. Edinburgh: Nelson.
- Pollock, R. 1992. The excavation of a souterrain and roundhouse at Cyderhall, Sutherland, *Proceedings of the Society of Antiquaries of Scotland* 122, 149–160.
- Pollock, D. 1997. The excavation of Iron Age buildings at Ironshill, Inverkeilor, Angus, *Proceedings of the Society of Antiquaries of Scotland* 127, 339–358.
- Pope, R.E. 2003. *Prehistoric Dwelling: Circular Structures in North and Central Britain c. 2500 BC–AD 500*. Unpublished Ph.D. thesis, University of Durham.
- RCAHMS 1956. (Royal Commission on the Ancient and Historical Monuments of Scotland) *The County of Roxburgh*. Edinburgh: HMSO.
- RCAHMS 1990. *North-East Perth: an Archaeological Landscape*. Edinburgh: HMSO.
- RCAHMS 1997. *Eastern Dumfriesshire: an Archaeological Landscape*.

Edinburgh: HMSO.

- Ralston, I.B.M. 1986. The Yorkshire Television vitrified wall experiment at East Tullos, City of Aberdeen District, *Proceedings of the Society of Antiquaries of Scotland* 116, 17–40.
- Ralston, I.B.M and Sabine, K.A. 2000. *Excavations of Second and First Millennia BC Remains on the Sands of Forvie, Slains, Aberdeenshire*. Aberdeen: Department of Geography and the Environment, University of Aberdeen, O'Dell Memorial Monograph 28.
- Rees, T. 1998. Excavation of Culhawk Hill ring-ditch house, Kirriemuir, Angus, *Tayside and Fife Archaeological Journal* 4, 106–128.
- Renfrew, C. 1979. *Investigations in Orkney*. London: Reports of the Research Committee of the Society of Antiquaries of London 38.
- Reynolds, P. 1994. Butser Ancient Farm, in A.P. Fitzpatrick and E.L. Morris (eds), *The Iron Age in Wessex: Recent Work*, 11–14. Salisbury: Trust for Wessex Archaeology.
- Rideout, J.S. 1992. Gillies Hill, Stirling, Central, in Rideout *et al.* 1992, 127–137.
- Rideout, J.S. 1995. Carn Dubh, Moulin, Perthshire: survey and excavation of an archaeological landscape 1987–90, *Proceedings of the Society of Antiquaries of Scotland* 125, 139–195.
- Rideout, J.S. 1996. Excavation of a promontory fort and a palisaded homestead at Lower Greenyards, Bannockburn, Stirling, 1982–5, *Proceedings of the Society of Antiquaries of Scotland* 126, 199–269.
- Rideout, J.S., Owen, O.A. and Halpin, E. 1992. *Hillforts of Southern Scotland*. Edinburgh: AOC Scotland Ltd Monograph 1.
- Sanderson, D.C.W., Placido, F. and Tate, J.O. 1988. Scottish vitrified forts: TL results from six study sites, *Nuclear Tracks and Radiation Measurements* 14, 307–316.
- Saville, A and Hallén, Y. 1994. The 'Obanian Iron Age': human remains from the Oban cave sites, Argyll, Scotland, *Antiquity* 68, 715–723.
- Selkirk, A. 2002. Cladh Hallan, *Current Archaeology* 179, 455.
- Sharples, N. 1984. Excavations at Pierowall Quarry, Westray, Orkney, *Proceedings of the Society of Antiquaries of Scotland* 114, 75–125.
- Shepherd, I.A.G. 1995. The Sculptor's Cave, Covesea, Moray: from Bronze Age ossuary to Pictish shrine? *Proceedings of the Society of Antiquaries of Scotland* 125, 1194–1195.
- Sheridan, J.A. 1997. The National Museums of Scotland archaeological radiocarbon dating programme: dates obtained during 1997, *Discovery and Excavation in Scotland* 1997, 117.
- Smith, A.N. 1995. The excavation of Neolithic, Bronze Age and Early Historic features near Ratho, Edinburgh, *Proceedings of the Society of*

Antiquaries of Scotland 125, 69–138.

- Terry, J. 1995. Excavation At Lintshie Gutter unenclosed platform settlement, Crawford, Lanarkshire, 1991. *Proceedings of the Society of Antiquaries of Scotland* 125, 369–427.
- Tipping, R. 1994. The form and fate of Scotland's woodlands, *Proceedings of the Society of Antiquaries of Scotland* 124, 1–54.
- Triscott, J. 1982. Excavations at Dryburn Bridge, East Lothian 1978– 9, in Harding 1982, 117–124.
- Torbrügge, W. 1970–1. Vor- und frühgeschichtliche Flussfunde, *Bericht der Römisch-Germanische Kommission* 51–2, 1–146.
- Wells, P.S. 1984. *Farms, Villages and Cities: Commerce and Urban Origins in Late Prehistoric Europe*. Ithaca/London: Cornell University Press.
- Wells, P.S. 2001. *Beyond Celts, Germans and Scythians: Archaeology and Identity in Iron Age Europe*. London: Duckworth.
- Wildgoose M., Burney C. and Miket R. 1993. Allt a'Ghasgain, *Manchester Archaeological Bulletin* 8, 5–10.
- Wildgoose, M., Burney, C. and Miket, R. 1994. Coille A'Ghasgain (Sleat parish), *Discovery and Excavation in Scotland* 1994, 42–43.
- Wordsworth, J. and Clark, P.R. 1997. The excavations: Kirkhill, in M. Rains and D. Hall, *Excavations in St Andrews 1980–89: a Decade of Archaeology in a Historic Scottish Burgh*, 7–18. Perth: Tayside and Fife Archaeology Committee Monograph 1.

The Early Iron Age of the Peak District: re-reading the evidence

Bill Bevan

Introduction

In two previous articles, I have discussed the evidence and some of the issues that lie behind the perception of a Peak District abandoned during the Iron Age and suggested that the socio-political history of Britain and academic tradition has greatly influenced our thinking on the Iron Age in the southern Pennines (Bevan 1999a; 2000). The lack of Iron Age occupation in the region has been most prominently argued by Richard Hodges, amongst others (Burgess 1985; Hodges 1991; Hodges and Wildgoose 1981). Working at Roystone Grange, Hodges developed the belief that there was a large-scale exodus of people from the region to lower altitudes during the Later Bronze Age. His argument is based on a number of factors, including a proposed climatic deterioration during the Later Bronze Age or Early Iron Age; a general lack of recognisable Iron Age sites or artefacts; and the apparent second century AD foundation dates of excavated Roman settlements. Are we right to propose that a region was comprehensively abandoned for such a long period? The possibility of continued inhabitation of the region throughout the Iron Age has been suggested (Barnatt 1999; 2000; Bevan 1999a; 2000). Here I will concentrate on one of the avenues I have discussed previously to investigate and interpret the evidence for later prehistoric (Later Bronze Age to Early Iron Age) settlement and agriculture on the Eastern Moors in greater detail.

Before looking at the evidence for settlement and farming on the Eastern Moors, I will first review two important new discoveries

from elsewhere in the region, which crucially have provided radiocarbon dates. For this paper, all dates have been calibrated using OxCal v3.8 and are quoted at two sigma.

If the dead lie here...

In the late 1990s, a caving club was exploring in an area of rolling carboniferous limestone just to the south-east of the Peak District National Park. They visited Carsington Cave, which breaks out of a curving promontory that diverges from the main limestone escarpment, first running south before turning west. Situated at an altitude of 300 m above OD, the cave entrance is surrounded by extensive remains of lead mining in the form of rakes, adits and shafts. As the club explored the cave, they moved downwards from the relatively open entrance chamber by clearing away clay and rubble and, as they dug deeper, they came into a second chamber. Little more than a 10 by 4 m area of the floor of the chamber was not solid bedrock, but an unconsolidated mix of limestone, gritstone and quartzite blocks. Lying on top of this floor the cavers found what they thought were human bones and after the police came archaeologists from the University of Sheffield, alerted to the potential antiquity of the remains (Chamberlain 1999).

Although some remains had been disturbed, many apparently remained *in situ* and comprised at least 20 individuals including adults, adolescents, children and neonates. Of the nine adult individuals, three were female, three male and three unsexed. A range of fauna was also discovered on the surface of the second chamber, mostly comprising domesticates such as sheep, goat, cattle, pig, horse, and dog. Excavation into this rubble floor found further human and animal remains below, associated with a worked bone pin typical of Bronze Age grave goods found in burial barrows of the region. Subsequent investigation of rubble in the entrance identified further chambers in which more human remains, prehistoric and Romano-British pottery, and a small number of Roman coins were found.

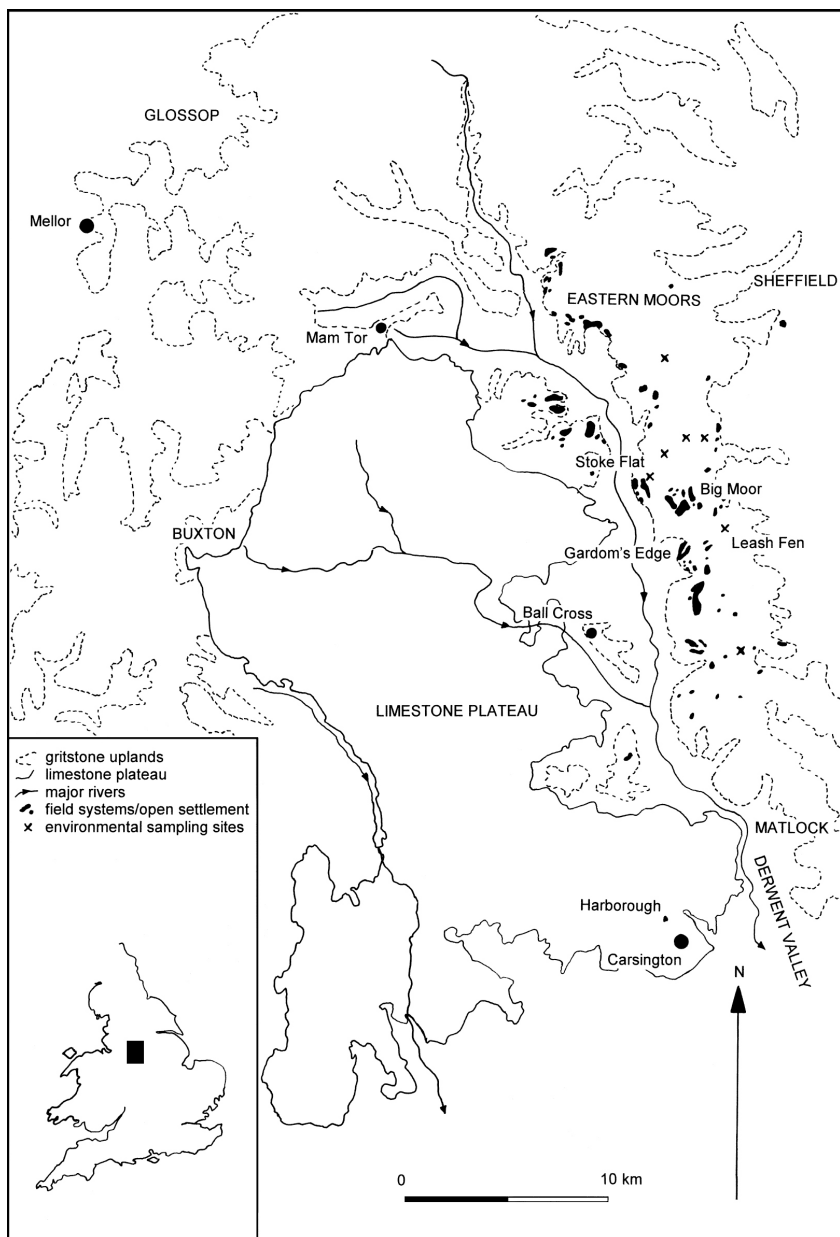


Fig. 1. Location of features and sites discussed in the text.

One of the human bones found on the surface of the second chamber was radiocarbon dated to 770–400 cal. BC (2435 ± 55 BP; Chamberlain 2001). A cut-marked femur from underlying deposits

was dated to the Late Neolithic or Early Bronze Age. These determinations show that there were at least three phases of deposition of human remains in the cave dating between the Later Neolithic/Early Bronze Age and the Roman period, which is consistent with the stratification of the sediments. Based on the range of ages present, the spatial separation of neonatal remains from the others, and the deposition of some individuals while articulated, the excavators interpreted the deposits in the second chamber as resulting from burial rites (Chamberlain 1999).

In a region of extensive cave formation, there are many other caves that contain human remains in association with artefacts, most commonly dating to the Neolithic, Bronze Age, and Romano-British periods. An exception is a Later Bronze Age/Early Iron Age settlement situated adjacent to Harborough Cave to the north of Carsington (Fig. 1). It was excavated in the nineteenth century and substantial amounts of pottery were found on a terrace, but other structures were non-existent or only ephemeral (Ward 1890).

An enclosure that opens doors

Over 40 km north-west of Carsington, on the other side of the Pennines, lies the village of Mellor. The village is overlooked by its medieval church built on an exposed hilltop with impressive views across the Cheshire Plain to the west, while the hills of the Peak District rise higher in the east. During dry weather in 1995, the current owners of the old vicarage made a discovery which resulted in various parts of their garden and neighbour's field succumbing to trench fever. Under the auspices of the Mellor Archaeological Trust, with support from Stockport Council and supervision provided by the University of Manchester Archaeological Unit, this has become perhaps one of the most significant Iron Age sites in the region (Holden 2001; Redhead and Roberts 2003).

The contour of the hill, situated at 220 m above OD, is followed by a substantial rock-cut ditch, between 0.9–2.0 m deep and 1.5–2.4 m wide, the fill of which varies from an homogenous backfill of surrounding subsoil to distinct layers including charcoal-rich material. Excavated sections of this ditch revealed various pot sherds and a near-complete hand-made, barrel-shaped vessel with an incurving rim made from a distinctive clay. The nearest source is

situated 18 km to the east, located within 6 km of Mam Tor (Cumberpatch *et al.* 2003). The form and fabric of the vessel also have affinities with pots found at Mam Tor and Dalton Parlours (*ibid.*). The rims and forms of the other sherds are Middle to Later Iron Age in character (D. Knight pers. comm.). Radiocarbon dating of a charcoal-rich layer located approximately mid-way up the ditch fill gave a range of 850–150 cal. BC (2430 \pm 140 BP; Holden 2001). Roman pottery was found in the upper ditch fills. Internal ditches, gullies and pits are currently under excavation but have yet to be dated.

Carsington is the first Early Iron Age burial site to be positively dated in the Peak District and Mellor is the only settlement in the region with both a radiocarbon date and pottery of Iron Age character. Both sites show the benefits of obtaining absolute dates for features in an area where many sites are only dated by comparison with artefacts from better-dated sequences elsewhere.

Eastern promise

The Eastern Moors occupy a gritstone ridge that runs north to south along the eastern side of the Derwent valley, which they overlook in a series of dramatic gritstone scarps (Fig. 1). This is an undulating landscape, which in places rises to 400 m above OD, but contains numerous shelves and plateaux situated between 200 and 300 m in altitude. To the west, the Derwent divides the ridge from the limestone plateau that forms the centre of the Peak District. The ridge dips to the east and south to run into the lower hills of north Derbyshire, which themselves give away to the gentler, lower-lying land of the Magnesian Limestone, Coal Measures and Trent valley. As the ridge runs north, it rises in height to the steep-sided high moorland of the Dark Peak and central Pennines. Here, there are few lower altitude terraces with the more level land generally situated at 400 m and above. During the historic period, cultivation and field enclosure only took place in the lower slopes and more favourable locations of the ridge, areas that have remained free of peat to this day. This has left the higher land on the ridge as open moorland, characterised by heather and coarse grasses growing on thick blanket peat.

The moorlands have long been recognised for their prehistoric

remains (Hart 1985; Barnatt 1987). Specific areas are remarkable for the sheer density of upstanding archaeological evidence for settlements, field systems, funerary sites and ceremonial monuments (cf. Fig. 1). The evidence for fields mainly exists as cairns, banks, and lynchets – low-lying stony features, which are often masked by peat and vegetation and are found by foot as often as by eye. They survive on the moors which in the nineteenth century were turned over by landowners to grouse shooting by privatising commons through Parliamentary and private acts of enclosure. This prevented huge swathes of land being improved for farming, the brave hunting instincts of the British aristocracy thus preserving past landscapes by default rather than design. Prehistoric fields do survive within the more recent fields where the soils are too thin and rocky to have been considered worth improving since the medieval period, an indication that at some locations there may have been a continuity of occupation and farming from prehistory to the modern day.

The settlements and fields are dated to the Bronze Age (Hart 1981; Barnatt 1987). This is based on associations with Later Neolithic/Early Bronze Age barrows and stone circles (Barnatt 1999), excavations of a flat cemetery at Eaglestone Flat (Barnatt 1994), and limited radiocarbon dates (Barnatt 1995). Crucially, a mindset of Later Bronze Age abandonment of the moors caused by climatic deterioration has been used by some to argue against continuation of occupation into the Iron Age (Burgess 1985; Hodges 1991). Today the moorlands are marginal upland locations and this marginality has been transported backwards into prehistory, despite the presence of modern farms at relatively high altitudes and, conversely, of the survival of fragmentary prehistoric field remains at lower valley locations.

Environmental cores

The potential key to dating the field systems of the gritstone ridge lies in the environmental samples that have been taken from excavated prehistoric boundaries and from mires adjacent to field systems. Direct dating evidence from the field systems themselves is more difficult to obtain due to the nature of the archaeology, which results in a paucity of well-sealed datable material and a lack of diagnostic artefacts. There are a series of samples from Gardom's

Edge, most of which await dating, which will contribute greatly to our understanding of field chronology. Two dates obtained in 2002 for a pit alignment have already confirmed the time-depth of land use on the moors by extending its duration to the Later Iron Age or early Romano-British period (Barnatt *et al.* in prep.). I will summarise the environmental evidence before moving on to discuss the nature of the fields and settlements.

Sheila Hicks took a number of pollen cores in bogs on the Eastern Moors in the early 1970s, at Ringinglow Bog, Totley Moss, Salter Sitch, White Edge, Leash Fen, and Hipper Sick (Hicks 1972). There was a major phase of woodland clearance across the moors during the Early Bronze Age. At Leash Fen, this was radiocarbon dated to 2050–1450 cal. BC (GaK-2287: 3450 \pm 110 BP), and followed a previous clearance phase between 2500–1850 cal. BC (GaK-2286: 3740 \pm 100 BP). Opening of the forest canopy resulted in the spread of plant species associated with human occupation and grasslands suggestive of pastoral activity. Very small amounts of cereal pollen grains show that limited arable cultivation was practised during the first half of the second millennium BC.

After the major clearance phase, there was a period where mixed vegetation appears to be maintained without further large-scale woodland clearance or regeneration. Marked changes in the vegetation of the Eastern Moors followed. Commencing between 800–50 cal. BC (GaK-2288: 2290 \pm 100 BP), the percentage of tree pollen falls significantly, whilst that of grasses, sedges, heaths, and other non-tree species rises. Between 390 cal. BC–90 cal. AD (GaK-2289: 2090 \pm 100 BP; GaK-2290 2110 \pm 90), rapid peat growth is observed, suggesting a wetter habitat. In some locations, cereal pollens appear for the first time in significant relative quantities and reach a peak between 200 cal. BC–400 cal. AD (GaK-2291: 1910 \pm 100 BP) and cal. AD 340–670 (GaK-2292: 1530 \pm 90 BP).

In the 1990s, Debbie Long returned to core some of these bogs to provide a regional control for samples she took from a field boundary, fields and peat within a stream gully on Stoke Flat (Long 1994; Long *et al.* 1998). The thrust of her research was to sample sites much closer to field systems because of the shorter ranges travelled by cereal pollen in wooded environments. This work

enabled her to investigate environmental sequences from later prehistory but, unfortunately, not from earlier periods because those sediments near to fields which were suitable for coring were not old enough.

The cores from the gully provided a good pollen sequence within which different zones were identified and radiocarbon dated. These again indicated a change from a heavily wooded landscape to one showing vegetation disturbance dominated by open species incorporating the pollen of cereal and agricultural weeds such as *Artemisia*, *Urtica* and *Chenopodiaceae*. These cereals and weeds appear on either side of a wood sample dated to 900–510 cal. BC (2595 ± 65 BP), showing that arable cultivation occurred during the Later Bronze Age or Early Iron Age. Woodland taxa are not absent at this time and may have existed as managed stands or as tree species incorporated into hedged boundaries.

Cereal pollen continued until the Later Iron Age, when a decline contemporary with a further reduction in tree cover occurred just before the stratigraphy of the cores changed from clay-based sediment to organic detrital mud dated to between 400 cal. BC–cal. AD 250 (2050 ± 100 BP). This widespread woodland loss and apparent cessation of cultivation precedes the wide-scale establishment of moorland and grassland habitats at approximately 2000 years BP, a trend seen across the Eastern Moors (*ibid.*). The field boundary core could not be directly dated but contained a similar sequence of pollen zones to the adjacent mire. Arable cultivation was evident from pollen both under the bank and found in the interstices between the stones. Cereal and weed pollen also declined as the woodland flora decreased.

Overall, the environmental evidence of both Hicks and Long attests the existence of agriculture on the present-day moors and nearby valleys during the second and first millennia BC. It is possible that the relative increase in cereal cultivation in the first millennium BC implied by the pollen evidence contributed to soil degradation through the over-intensive working of relatively fragile soils, although it is also likely that pollen was travelling further in the more open environment that now existed, and may have originated from nearby valley slopes. The spread of moorland peat during the fourth and third centuries BC is visible in cores. Higher

ground and water-collecting hollows would be most susceptible to peat growth and consequently were the places where the earliest blanket peat formed. Different areas of the moors would have become unsustainable for arable and intensive pasture at different times, dependent on local topography and altitude. That areas still farmed today are free of peat, centuries after the presumed climatic deterioration during the early first millennium BC, suggests that continuous manuring can maintain pasture quality even on fragile soils (Barnatt 2000). This creates a much more complex picture of changing land potential, and counters the interpretation that climatic changes caused wholesale abandonment of the moors in any one period.

More recently, soil samples have been taken from boundaries, cairns and test pits across Big Moor and Gardom's Edge. These show little sign of the large-scale erosion that might be consistent with intensive cultivation from one season to the next. It is likely that people practised some form of long-fallow system, leaving some plots to regenerate while they cultivated others. Livestock pasturing was an important element, but the balance between the two is as yet difficult to determine due to lack of bone survival.

Prehistoric settlements and field systems

The first prehistoric settlement to be excavated on the Eastern Moors was Swine Sty, located on a lower part of Big Moor, which was investigated in the 1960s and 1970s by the Hunter Archaeological Society (Machin 1971; 1975). Artefacts dating from the Neolithic to the Romano-British period were found in loose association with an enclosure, confirming the potential of local prehistoric settlements for long histories. During the early 1990s the Royal Commission on the Historical Monuments of England and the Peak District National Park Authority carried out detailed surveys of several of the Eastern Moors field systems, whilst between 1995 and 2000, an extensive series of excavations and environmental sampling has been conducted at Gardom's Edge (Barnatt *et al.* 2002). A sample range of features was excavated, including building platforms, field boundaries, cairns, a pit alignment and a large scarp-edge enclosure.

Due to the low incidences of material culture, it is difficult to date

specific elements within a field system with any confidence, except when these are found in close association with buildings (as we will see below). There are, however, complex histories of boundary reworking and variations in field form (Barnatt 2000). Surface remains indicate cairnfields with no evidence of boundaries, as well as small and irregular areas of cleared ground defined by linear clearance, and more regularly laid out rectilinear fields with distinct boundaries. Areas such as Big Moor and Stoke Flat comprise small, sub-rectangular fields. Those to the northern edge of Big Moor are arranged into co-axial fields which sweep upslope. On Birchen Edge and Derwent Moor, the fields are defined by cairns with hardly any linear boundaries evident. Different areas on the Gardom's Edge terrace, for example, contain different forms of fields. The southern half comprises very small, irregular areas of clearance made within a dense boulder field. Here, the boundaries as often comprise patches of linear clearance piled against the edge of the existing boulder field, as they do built features. On the northern half of the terrace, there are larger, more rectangular fields within which large cairns are arranged in orderly rows, and which, in places, can be seen to overlie smaller, more irregular examples.

The fields are not imposed on the landscape – as, for example, are the brickwork fields of the Sherwood Sandstone ridge running through West Yorkshire, South Yorkshire, and north Nottinghamshire (Riley 1980; Garton 1987; Chadwick 1999) – but have a very strong relationship with local topography and soils. They occupy terraces and low summits which overlook the Derwent valley to the west and, in lower numbers, the easterly-draining watercourses that flow into the Rivers Rother and Don. They predominantly occupy favourable areas of lighter, sandy soils on more level ground situated below 400 m above OD, which are separated by deeply incised watercourses (Barnatt 1987; 1999; 2000). Each field system is separated from the next by unenclosed land less hospitable to agriculture, because of high altitudes, heavy clay soils or steep slopes. Each field system therefore forms a neighbourhood group, spatially and culturally separated from the others by this open land (Barnatt 2000). Each may have been occupied by a different kin-group or extended family. The thin soils of the moors will have ensured that stone clearance was an

everyday part of the agricultural routine. In turn, the physical toil required to remove stone regularly and continually from turned-over soil will have encouraged a strong connection to place, the investment of labour transcending mere economic payback to form social and emotional bonds with the land (cf. Giles this volume).

Discrete dumps of stone produced by individual episodes of clearance are visible in cairns and linear piles. In places, the nature of boundaries or cairns goes beyond simple stone dumping, with architectural elements being deliberately constructed to emphasise specific locations, to create different effects when approaching from different positions, or to encourage movement in certain directions. One example is the terminus of a field boundary on Gardom's Edge, which was formed by placing two massive square boulders adjacent to one another, so as to appear to raise the level of the whole bank when seen from below. Another is a field boundary entrance, within which Later Bronze Age/Early Iron Age pottery was found. The entrance is arranged to direct anyone walking from north to south to turn to face the north-west façade of a large cairn nearby. Early Bronze Age flints and pottery were deliberately deposited in front of the façade.

The long history of land use within field systems that is indicated by the positioning of a boundary entrance on an early feature is echoed elsewhere. The variation in field form is rarely dramatic. There is a general lack of evidence for the radical replacement of one style of field layout by another (Barnatt 1999). The small adjustments and additions to boundaries attest to communities who respected and actively maintained the existing pattern of land use. Existing features were incorporated into the memory and stories of those inhabiting the field systems over different generations. They also suggest the long-term occupation of these areas from one generation to another without significant periods of abandonment in between (*ibid.*). However, there are areas where there was more dramatic reorganisation of fields. In one area on Gardom's Edge, a sub-circular enclosure was found to have been overlain by a linear bank and by boundaries associated with a series of smaller sub-rectangular and irregular enclosures that comprise a discrete field system (Fig. 2). An entrance to this enclosure was blocked by a boundary of the later field system, whilst the enclosure bank had

clearance piled against it. Even here, however, extensive lengths of the sub-circular enclosure were incorporated into the later fields.

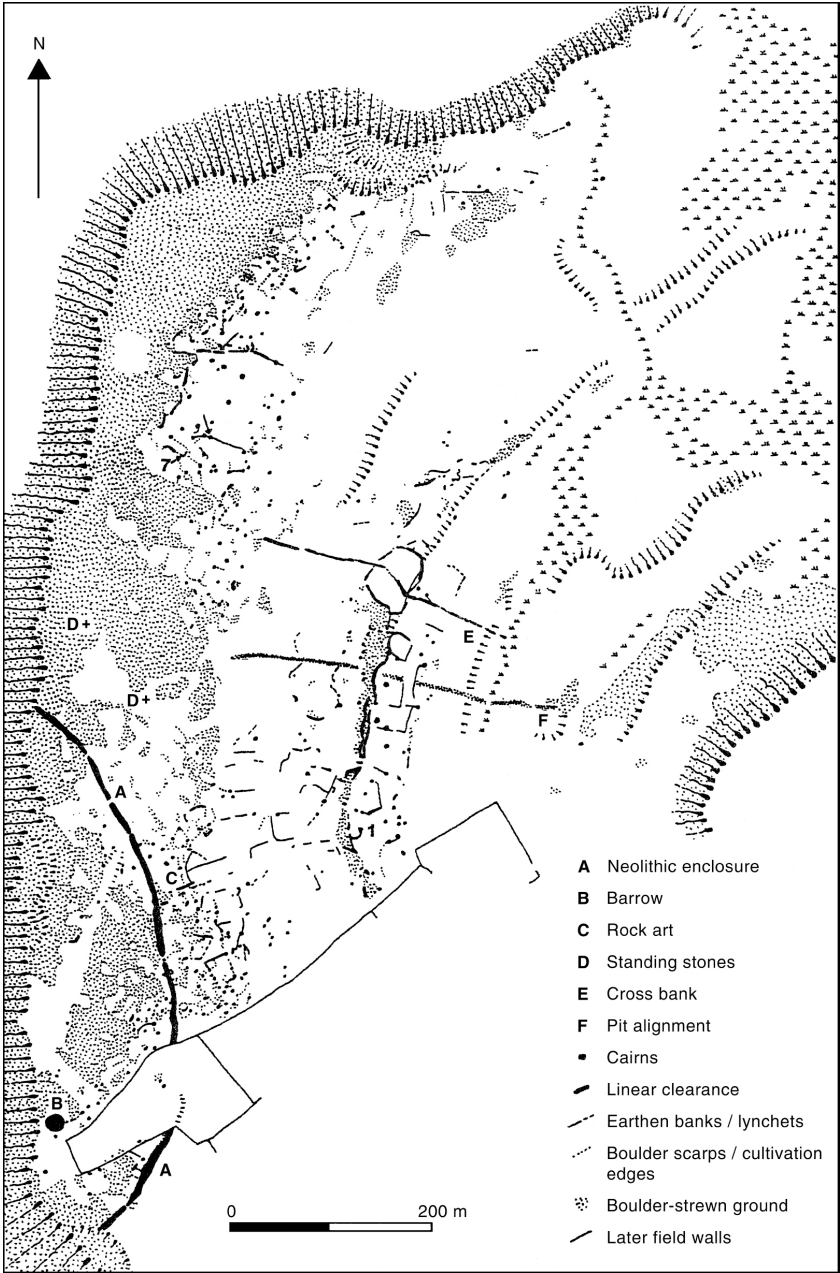


Fig. 2. Archaeological features on Gardom's Edge. All three roundhouses date to

The unenclosed areas that separate the field systems would not only have provided extensive grazing, but can be seen as places of greater social ambiguity. The presence of people tending livestock in these areas both extends the social connection with place beyond the settlement area and creates new horizons for social interactions. Rights to access, grazing, and other land use would potentially be more fluid and volatile in these in-between locales. Some areas may have been closely identified with specific communities, whilst others would have been shared and contested, potentially leading to conflicts.

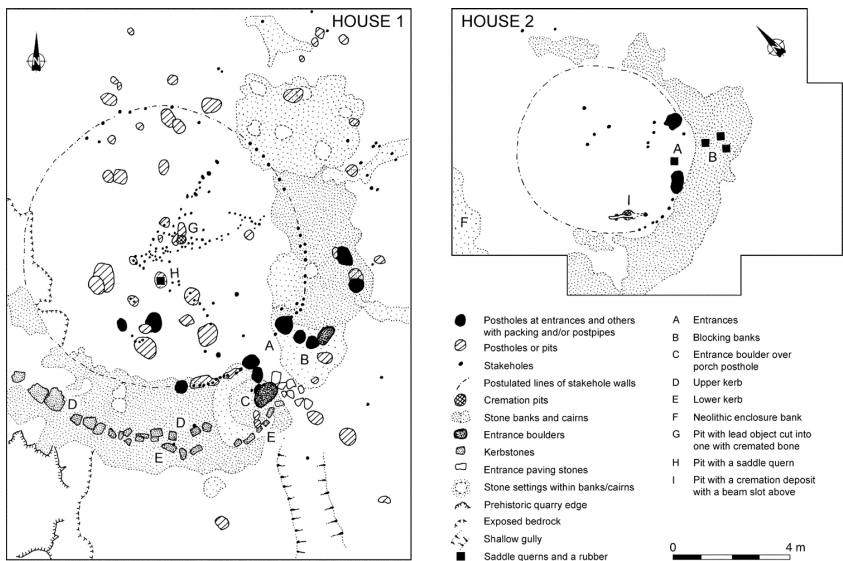


Fig. 3. The two better surviving roundhouses on Gardom's Edge. Closure and later re-use of the house sites was highly structured, involving the creation of stone banks and deposition of objects focused on the blocking or maintenance of the doorway.

Buildings

Scattered amongst these fields are the platforms of circular buildings, some partly enclosed or encircled by banks of stone. In addition to the building excavated at Swine Sty, three have been excavated on Gardom's Edge, two of them with good structural survival, although the third was largely 'ploughed out' in prehistory.

Swine Sty is situated on a south-facing slope downhill from the Big Moor field system, which is one of the most extensive field systems on the Eastern Moors (Hart 1981). It comprises a stone-footed roundhouse approximately 5 m in diameter with a south-east facing entrance (Machin 1971; 1975). The building lies adjacent to the internal face of a rubble bank forming a small irregular enclosure. The house overlies the location of an earlier timber structure, indicated by the presence of a sub-circular bulge in the line of the bank, and possible post holes. Early Bronze Age and Later Bronze Age/Early Iron Age pottery was found inside and outside the building circuits. The sherds were lying within, or immediately under, a deposit described by the excavator as black and greasy (*ibid.*), apparently a peaty soil which seemingly extended across the whole of the trench. This overlay the yellow sandy subsoil, and was, in its turn, overlain by up to 0.2 m of dark and light brown sands. As currently published, the results of the excavation do not allow a closer association of pottery and each building phase, nor is there any mention of hearths.

One of the buildings on Gardom's Edge (House 2) was a simple stake-built structure 6 m in diameter, with a south-east facing doorway defined by two square-cut timber posts (Fig. 3; Barnatt *et al.* 2002). The structure was associated with a cremation, which was placed in a pit inside the building and covered by a small slot beam above. On abandonment, the doorway was blocked by a rubble bank in which a gritstone saddle quern was placed in an inverted position. Numerous sherds of friable, hand-made Later Bronze Age/Early Iron Age pottery and burnt cobbles were found immediately outside the entrance.

The other surviving building (House 1) was a far more elaborate structure. It comprised a post-built round building approximately 10 m in diameter, with a south-east facing doorway 1.25 m wide, and flanked by the substantial posts of a porch. Immediately to the south-east of the entrance were spreads of compacted red-brown material, containing an abundance of burnt stone and small fragments of heavily abraded Later Bronze Age/Early Iron Age pottery. Over time, the structure had stone cairns piled around it and was then partly enclosed by stone banks, which seemed to preserve the doorway in the form of a paved entrance marked by

very large boulders (Fig. 4). The banks contained elaborate architectural features, including stepped kerbing and small pits. In the centre of the house were an inverted saddle quern and a pit containing a small lead torc-like object. The house was built on the south-eastern end of a locally prominent ridge of outcropping stone. To locate the building here, the uprights had to be supported with chocking stones along the western side of the wall where the outcrop was covered in a thin layer of soil. Importantly, there was no evidence for a hearth in either building, despite the presence of dense scatters of burnt stones outside the entrances.

The type of friable pottery recovered in the excavations at Swine Sty and Gardom's Edge has been discovered elsewhere in the Peak District, notably at Ball Cross and Mam Tor (Stanley 1954; Machin 1971; 1975; Coombs and Thompson 1979; Hart 1981). In nearly all instances, it is found in close association with buildings. At Gardom's Edge, large assemblages were found immediately outside the doorways, and little pottery was found elsewhere, except in association with entrances through field boundaries. The pottery is handmade from local materials (Guilbert 1996), and is mostly undecorated, with a small number of finger-impressed decorated sherds. Fabrics are typical for the Later Bronze Age/Early Iron Age in the East Midlands generally, while vessel forms include shouldered jars and globular pots (P. Beswick pers. comm.). The date range for this type of pottery may actually be much wider, but the lack of stratified deposits containing pottery and of absolute dates for pot-bearing contexts makes it difficult to refine the chronology further.

Dating of the region's later prehistoric pottery is still linked to the well-studied ceramic sequences of Wessex, even though very different trajectories have been proposed for other areas (Knight 2002). In particular, Knight has used the abundant data from recent excavations in the nearby East Midlands to define four successive ceramic traditions during the first millennium BC, incorporating changing styles but with only limited discernible differences in the fabrics over time (*ibid.*). While regional variation is evident, major chronological trends are difficult to identify. New forms of vessel were introduced gradually over quite lengthy periods of time and existing attributes continued to be incorporated. Changes were not

introduced at the same time, nor were they equally embraced, and types continued in use longer in the uplands than in the lowlands (Elsdon 1989).



Fig. 4. The entrance of the larger house and part of the later, encircling stone bank under excavation on Gardom's Edge. The deep post holes flanking the doorway are visible in the foreground.

Throughout the region, decoration is rare on sherds, with little evidence for a development from plain to decorated wares during the first half of the first millennium BC, as identified by Barrett (1980) in areas such as Wessex. The only site in the East Midlands which may have such a sequence is Thrapston in Northamptonshire (Hull 2000–1). Even on those sites which are dated by other means to the Later Bronze Age/Early Iron Age, decorated sherds are rare (Knight 2002). Conceptualising the later prehistoric pottery of the Peak District and the wider East Midlands as a simple extension of the typological sequences identified for southern England is therefore an inappropriate approach to the region's ceramics.

It will be difficult to refine the chronology further until independent techniques such as radiocarbon and luminescence are systematically applied to date the pottery. This requires a

combination of stringent sampling techniques and good fortune, as well as the mindset to realise that the pots themselves need dating, rather than simply using them to date features. Despite the wide error ranges associated with luminescence dating, a recent project to test the technique on later prehistoric pottery yielded interesting results (Barnett 2000). When sherds with diagnostic forms and surface decoration were analysed, there was a close correlation of dates, whereas undecorated body sherds produced widely divergent dates. This demonstrates the need to unshackle pots from their present role as the main form of on-site dating evidence and not to rely too heavily on chronologies based on extrapolating data from decorated sherds to undecorated fabrics. Until this is achieved in the Peak District, we should be careful not to place too much reliance on dates based on pottery alone. If – and this is a big ‘if’ – the radiocarbon date and pottery from the enclosure ditch at Mellor are chronologically associated, it shows that Mam Tor type pottery was still in use in the Later Iron Age.

Returning to the distribution of buildings, smaller family units are not identifiable in the dispersed pattern where houses appear individually rather than in clusters. The majority of buildings are unenclosed, indicating no desire on the part of the occupants physically to separate themselves from others at this level. This suggests a duality which emphasises the household, while at the same time connecting that household to others in the vicinity (Hill 1995). Proximity of houses and an interdependence of activities would create daily contact between different households within each neighbourhood group. The prominent location of the larger excavated house at Gardom’s Edge, the elaborate architecture and the activities conducted around it after its abandonment all indicate the importance of this structure.

Whether the whole of each field system was occupied at any one time, or whether people shifted from one location to another within the neighbourhood group over time, is unclear (Barnatt 2000). The longevity of settlement and cultivation on the relatively fragile soils of the gritstone ridge, potentially extending for two millennia, argues against permanent sedentary occupation within a ‘full’ landscape where every field is cultivated at the same time. More likely is the husbanding of the land by leaving some in fallow,

perhaps relocating occupation sites to different locations. The lack of hearths within the buildings on Gardom's Edge, and possibly at Swine Sty, also opens the possibility that occupation on the higher, now moorland, areas of the gritstone ridge was seasonal rather than year-round.

Discussion

The Early Iron Age of the Peak District is still chronologically unrefined and has previously been dismissed as a period of abandonment by those looking for traditional archaeological remains. The evidence from environmental cores taken on the Eastern Moors is, however, clear. Mixed agriculture was practised throughout the second and first millennia BC, even if there are fewer sites obviously attributable to this period.

The Early Iron Age landscape is characterised by small plots of enclosed land located on specific topographical locations associated with slope, soils and altitude. This is probably much the same as in the Bronze Age, and contrasts with the larger, more regular Iron Age enclosures in the Trent valley to the south and the Sherwood Sandstones ridge to the east. If anything, a continuity of local traditions over generations of inhabitants is evident on the Eastern Moors. These field systems are separated from each other by expanses of open ground comprising a varied landscape of rough grasslands and woodlands. Settlement within each field system is a dispersed pattern of isolated round buildings. Most appear unenclosed, Swine Sty being the discernible exception. The importance of the household is emphasised through building architecture, and activities conducted in relation to and after house abandonment. Households would nevertheless have interacted closely with one another due to the proximity of house locations and the interdependency of agricultural and other activities.

Dating of the Eastern Moors field systems requires closer refinement. The available environmental evidence gives a general picture for the whole region and only in places such as Stoke Flat does it relate specifically to an individual field system. Absolute dates are still rare and restricted to certain types of feature such as funerary deposits. In an area largely lacking in diagnostic material culture, there is also the need to date pottery by radiocarbon or

thermoluminescence rather than to rely on pottery typology for dates (Barnett 2000). We hope that current post-excavation analysis of fieldwork conducted on Gardom's Edge will eventually lead to a better understanding of the complex nature and chronologies of later prehistoric land use and occupation.

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Bibliography

- Barnatt, J. 1987. Bronze Age settlement on the gritstone East Moors of the Peak District of Derbyshire and South Yorkshire, *Proceedings of the Prehistoric Society* 53, 393–418.
- Barnatt, J. 1994. Excavations of a Bronze Age unenclosed cemetery, cairns and field boundaries at Eaglestone Flat, Curbar, Derbyshire, *Proceedings of the Prehistoric Society* 60, 287–370.
- Barnatt, J. 1995. Neolithic and Bronze Age radiocarbon dates from the Peak District: a review, *Derbyshire Archaeological Journal* 115, 5–19.
- Barnatt, J. 1999. Taming the land: Peak District farming and ritual in the Bronze Age, *Derbyshire Archaeological Journal* 119, 19–78.
- Barnatt, J. 2000. To each their own: later prehistoric farming communities and their monuments in the Peak, *Derbyshire Archaeological Journal* 120, 1–86.
- Barnatt, J., Bevan, B. and Edmonds, M. 2002. Gardom's Edge: a landscape through time, *Antiquity* 76, 50–56.
- Barnatt, J., Bevan, B. and Edmonds, M. in preparation. *Gardom's Edge*.
- Barnett, S. 2000. Luminescence dating of pottery from later prehistoric Britain, *Archaeometry* 42, 431–457.
- Barrett, J. 1980. The pottery of later Bronze Age in lowland England, *Proceedings of the Prehistoric Society* 46, 297–319.
- Bevan, B. 1999a. Northern exposure: interpretative devolution and the Iron

- Ages in Britain, in Bevan 1999b, 1–19.
- Bevan, B. (ed.) 1999b. *Northern Exposure: Interpretative Devolution and the Iron Ages in Britain*. Leicester: Leicester Archaeology Monograph 4.
- Bevan, B. 2000. Peak Practice: what ever happened to the Iron Age in the southern Pennines?, in J. Harding and R. Johnson (eds), *Northern Pasts: Interpretations of the Later Prehistory of Northern England and Southern Scotland*, 141–156. Oxford: British Archaeological Reports British Series 302.
- Burgess, C. 1985. Population, climate and upland settlement, in Spratt and Burgess 1985, 195–231.
- Chadwick, A. 1999. Digging ditches, but missing riches? Ways into the Iron Age and Romano-British cropmark landscapes of the north Midlands, in Bevan 1999b, 149–172.
- Chamberlain, A.T. 1999. Carsington Pasture cave, Brassington, Derbyshire: a prehistoric burial site, *Capra* 1, <http://www.shef.ac.uk/~capra/1/carsing.html>
- Chamberlain, A.T. 2001. Radiocarbon dates from Carsington Pasture cave, Brassington, Derbyshire, *Capra* 3, <http://www.shef.ac.uk/~capra/3/carsdates.html>
- Coombs, D.G. and Thompson, H. 1979. Excavations of the hillfort of Mam Tor, Derbyshire 1965–69, *Derbyshire Archaeological Journal* 99, 7–51.
- Cumberpatch, C.G., Ixer, R., Leary, R., Morris, E.L. and Walster, A. 2003. *Pottery from excavations at Mellor, Stockport; a review*. Mellor Archaeological Trust: Unpublished archive report.
- Elsdon, S.M. 1989. *Later Prehistoric Pottery in England and Wales*. Princes Risborough: Shire.
- Garton, D. 1987. Dunston's Clump and the brickwork plan field systems at Babworth, Nottinghamshire: excavations 1981, *Transactions of the Thoroton Society of Nottinghamshire* 91, 16–73.
- Guilbert, G. 1996. Petrology of some prehistoric pottery from Mam Tor, *Derbyshire Archaeological Journal* 116, 49–59.
- Hart, C.R. 1981. *The North Derbyshire Archaeological Survey to AD 1500*. Chesterfield: North Derbyshire Archaeological Trust.
- Hart, C.R. 1985. Gardom's Edge, Derbyshire: settlements, cairnfields and hillfort, in Spratt and Burgess 1985, 71–76.
- Hicks, S. 1972. The impact of man on the East Moor of Derbyshire, *Archaeological Journal* 129, 1–21.
- Hill, J.D. 1995. How should we understand Iron Age societies and hillforts? A contextual study from southern Britain, in J.D. Hill and C.G. Cumberpatch (eds), *Different Iron Ages: Studies on the Iron Age of Temperate Europe*, 45–66. Oxford: British Archaeological Reports

International Series 602.

- Hodges, R. 1991. *Wall-to-Wall History*. London: Duckworth.
- Hodges, R. and Wildgoose, M. 1981. Roman or native in the White Peak: the Roystone Grange project and its regional implications, *Derbyshire Archaeological Journal* 101, 42–57.
- Holden, S. 2001. *Excavations of the Hillfort at Mellor, Stockport: Interim Report 2000 and 2001 Season*. Unpublished report, University of Manchester Archaeology Unit and Mellor Archaeological Trust.
- Hull, G. 2000–1. A late Bronze Age ringwork, pits and later features at Thrapston, Northants., *Northamptonshire Archaeology* 29, 73–92.
- Knight, D. 2002. A regional ceramic sequence: pottery of the first millennium BC between the Humber and the Nene, in A. Woodward and J.D. Hill (eds), *Prehistoric Britain: the Ceramic Basis*, 119–142. Oxford: Prehistoric Ceramics Research Group Occasional Paper 3.
- Long, D.J. 1994. *Prehistoric Field Systems and the Vegetational Development of the Gritstone Uplands of the Peak District*. Unpublished Ph.D. thesis, University of Keele.
- Long, D.J., Chambers, F. and Barnatt, J. 1998. The palaeoenvironment and the vegetation history of a later prehistoric field system at Stoke Flat on the gritstone uplands of the Peak District, *Journal of Archaeological Science* 25, 505–519.
- Machin, M.L. 1971. Further excavations of the enclosure at Swine Sty, Big Moor, Baslow, *Transactions of the Hunter Archaeological Society* 10, 5–13.
- Machin, M.L. 1975. Further excavations of the enclosure at Swine Sty, Big Moor, *Transactions of the Hunter Archaeological Society* 10, 204–207.
- Redhead, N. and Roberts, J. 2003. Mellor: a new Iron Age hillfort, *Current Archaeology* 189, 400–403.
- Riley, D.N. 1980. *Early Landscape from the Air*. Sheffield: J.R. Collis Publications.
- Spratt, D. and Burgess, C. (eds) 1985. *Upland Settlement in Britain*. Oxford: British Archaeological Reports British Series 143.
- Stanley, J. 1954. An Iron Age fort at Ball Cross, Bakewell, *Derbyshire Archaeological Journal* 74, 85–99.
- Ward, J. 1890. On some diggings near Brassington, Derbyshire, *Derbyshire Archaeological Journal* 12, 108–132.

The Early to Later Iron Age transition in the Severn–Cotswolds: enclosing the household?

Tom Moore

Introduction

The nature of the transition in settlement patterns and material culture between the earlier and later first millennium BC has been relatively neglected in recent years. This reflects a wider trend in prehistoric archaeology to downplay the importance or even existence of ‘transitions’ (Needham this volume). This paper seeks to address some of the issues of this transition from the perspective of the Severn–Cotswolds region.

Settlement and landscape change in the mid first millennium BC is frequently explained in terms of the growth of ever larger social units dominated by hillfort communities (e.g. Cunliffe 1984a; 1991). Such models tend to see change as ‘top-down’, relating to the growth of powerful groups subordinating others, whilst essentially operating within the existing social discourse, rather than marking new social developments. Because the Severn–Cotswolds is close to Wessex and has similar features, such as hillforts, the region has tended to be placed within analogous settlement models without closer examination of the regional archaeological record (e.g. Cunliffe 1984b; Darvill 1987; Clarke 1993). This proximity to Wessex has also meant that the recent stress on regionality in British Iron Age studies (e.g. Gwilt and Haselgrove 1997; Bevan 1999) has largely by-passed the Severn–Cotswolds.

These regionally orientated studies have generally shied away from broader, narrative explanations of settlement and social change (cf. Gerritsen 2003, 11). In reaction to this, a number of authors have shown how taking a long-term perspective can often

illuminate broader changes in the nature of community organisation (e.g. Pope 2003; Gerritsen this volume). The meaning of the quantity and nature of material culture surviving from different periods has also been receiving attention, but, for the British Iron Age, the focus has generally been on the social implications of the increase in material at the end of the period (e.g. Hill 1997; Willis 1997), whilst the contrasts between the earlier and later first millennium BC have received less attention.

This paper seeks to redress the situation, arguing that the archaeological record of the Severn–Cotswolds indicates an important contrast in settlement form and material culture between the Earlier and Later Iron Age.¹ It is suggested that this may be part of a more fundamental change in societies across southern Britain. At the same time, as a result of new PPG16-related excavations, the region can now be studied on its own terms.

The purposes of this paper, therefore, are threefold: to outline the character of the Earlier Iron Age in the Severn–Cotswold region; to define the changes that took place around the fifth–fourth centuries BC; and to suggest that these marked an important development in Iron Age society. I will focus particularly on the apparent shift in settlement form between the first and second halves of the first millennium BC, which relates to important changes in the way that communities redefined themselves at the end of the Early Iron Age. The study area focuses on the Cotswold Hills and the lower Severn valley, including Gloucestershire, parts of southern Herefordshire and Worcestershire, parts of the upper Thames valley and the area formerly covered by Avon (Fig. 1).

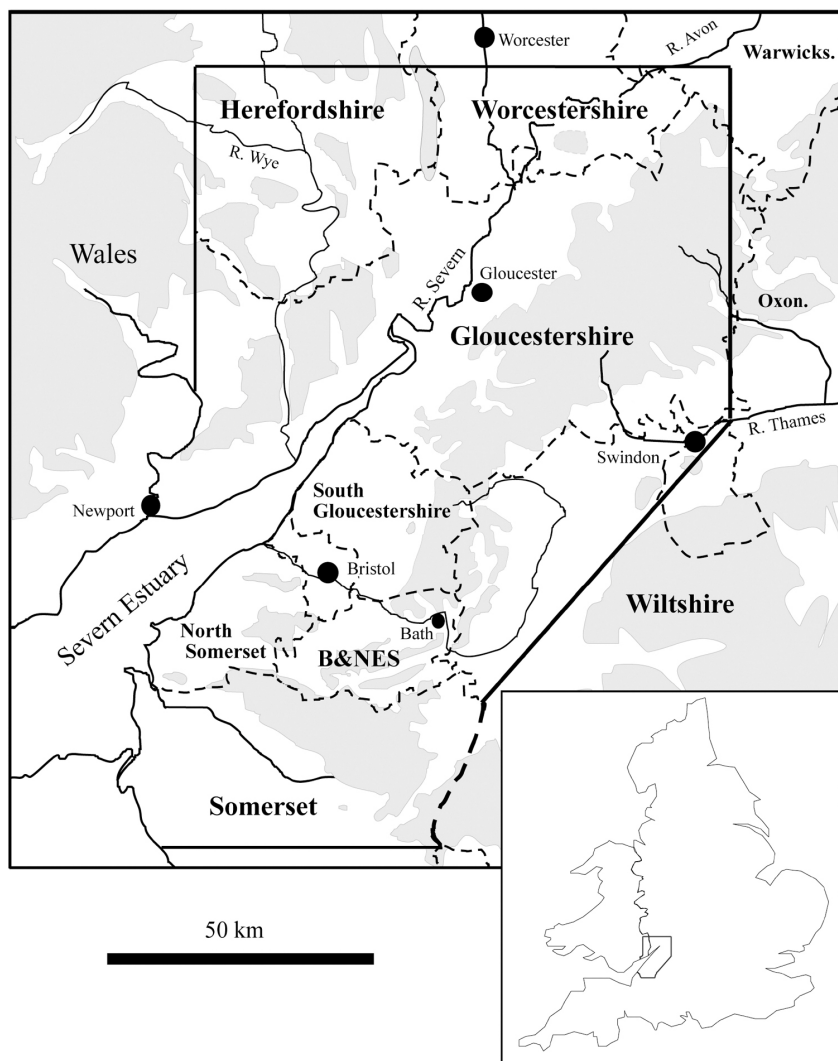


Fig. 1. The Severn–Cotswolds study area, showing SMR authority boundaries.

Recognising the Early Iron Age in the region

In order to reassess the Early–Middle Iron Age transition we need first to establish the nature of Earlier Iron Age settlement in the region. One of the main characteristics of the period is the apparent paucity of evidence compared to later in the Iron Age. In this respect, the region is similar to many other areas of the British Isles outside Wessex (e.g. Willis 1997; Champion this volume; Henderson

this volume). Beyond a few well-known sites, such as Crickley Hill (Dixon 1976; 1994), little is known of the nature of settlement, despite a number of large-scale surveys and excavations. The A417/A419 road scheme, for example, revealed numerous Later Iron Age and Roman sites, but nothing of Late Bronze Age or Early Iron Age date (Mudd *et al.* 1999).

The scarcity of evidence in the lower Severn and Cotswolds contrasts with the upper Thames valley, which has yielded much more material. Rather than necessarily being a product of denser settlement in prehistory, this may be due to various preservation and recording factors, including better site detection through aerial reconnaissance and large-scale landscape investigations ahead of gravel extraction, in contrast to the more piecemeal interventions on the Cotswolds and in the Severn and Avon valleys. Spreading, unenclosed settlements, like those at Shorncote (e.g. Hearne and Adams 1999) and Reading Business Park (Moore and Jennings 1992), which appear to be characteristic of the earlier first millennium BC, are much more easily recognised in the large-scale excavations required prior to gravel extraction. These also allow more detailed reconstruction of linear boundaries and landscape organisation, as around Lechlade (Allen *et al.* 1993; Boyle *et al.* 1998). The smaller excavations in the Severn–Cotswolds area have been unable to examine landscapes in the same way, although those at Frocester and Hucclecote hint at similar settlement patterns having existed in the Severn valley.

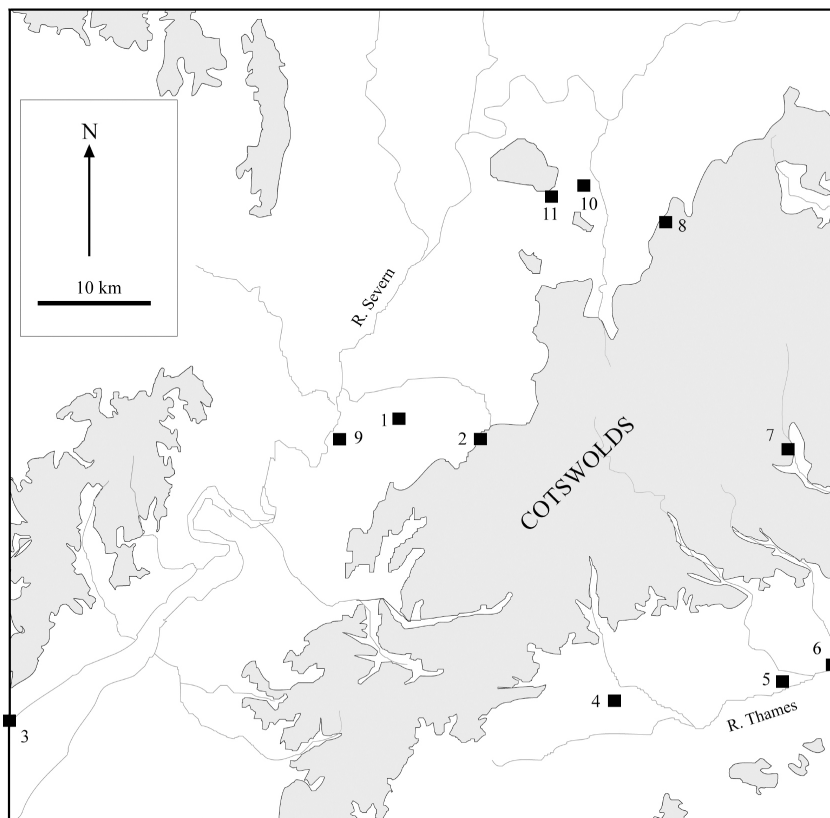


Fig. 2. Location of sites mentioned in the text: 1. Hucclecote; 2. Crickley Hill; 3. Thornwell; 4. Shorncote/Ashton Keynes; 5. Roughground Farm; 6. Butler's Field; 7. Bourton-on-the-Water; 8. Burhill; 9. Crypts Grammar School, Gloucester; 10. Dumbleton; 11. Beckford.

Another difficulty is the chronological framework for the Severn-Cotswolds. The focus of recent excavation has been on the river valleys, especially the Thames and there has as yet been little new work on the region's hillforts. This lack of excavated information has led to an undue reliance on hillfort morphology for dating purposes. Both Marshall (1978) and Darvill (1987) have used this approach to attribute unexcavated sites to the early period, using sites from Wessex as morphological anchors. This has resulted in a mistaken confidence that the process of social development in the Earlier Iron Age is well understood, when in reality the underlying chronological model may be completely inappropriate.

In an attempt to circumvent these problems, this study will take a broad view of changes between the earlier and later first millennium BC, with a particular emphasis on the growing number of available radiocarbon dates. Despite the problems in identifying sites, some more general observations can be made about the nature of earlier first millennium BC settlement in the region.

Hilltop enclosures

A range of hilltop enclosures has been identified as Late Bronze Age or Early Iron Age (Fig. 2). The very large enclosures, seen at Bathampton (Wainwright 1967) and Norbury-Northleach (Saville 1983), have been suggested as one of the earliest forms (Wainwright 1967; Cunliffe 1991, 346), dated to the Late Bronze Age or Earliest Iron Age. Other examples have also been proposed, mainly on the grounds of morphology, as with Maes Knoll (Rahtz and Barton 1963),² or of limited artefactual evidence, such as the Late Bronze Age hoard at Nottingham Hill (Hall and Gingell 1974). With so little information, it is too early to be sure whether these sites are really earlier than other hillforts like Crickley Hill, or whether we are inadvertently invoking an evolutionary model of development that is not altogether appropriate to the study area (e.g. Cunliffe 1991; 2000).

The most fully investigated hillfort, Crickley Hill, was first occupied around the eighth century BC and been abandoned in the sixth–fifth century BC (Dixon 1994, 107; 220).³ Other Cotswolds hillforts with probable Early Iron Age activity include Shenberrow (Fell 1961), Burhill (Marshall 1989) and Cleeve Cloud (Saville 1984), whilst Stow-on-the-Wold may have been occupied by the Late Bronze Age (Parry 1999). A few sherds from Leckhampton (Champion 1976; Elsdon 1994) may also imply early activity there, although this is open to interpretation. An early phase has been postulated for Midsummer Hill (Field 2000, 17), but Stanford's (1981) excavations only revealed material that is best viewed as of 'Middle' Iron Age tradition.

Hillforts with Early Iron Age activity are also well represented in the south of the study area, including larger enclosures such as Little Solsbury (Falconer and Adams 1935) and Bury Wood (Grant-King 1967). The cross-ridge dykes at Kings Weston (Rahtz 1956)

and Worlebury may also be early and pre-date the Early Iron Age enclosure at the former and the Later Iron Age hillfort at the latter. Smaller well-defended hillforts exist at Budbury (Wainwright 1970) and Burlledge (Apsimon 1977), although systematically excavated sites are poorly represented. Other hilltop enclosures have been postulated as early, largely on morphological grounds, as in the case of the similarities between Windrush Camp, Gloucestershire, and Chastleton Camp, Oxfordshire (Darvill 1987). The varied morphology of early hillforts, however, cautions against such parallels and suggests it may be better to await dating evidence.

There is some evidence that rectangular structures were prevalent at early hillforts and in some cases may have formed domestic structures (Moore 2003a). Rectangular houses at Crickley Hill (Dixon 1976; 1994), Norbury-Northleach, and Budbury (Wainwright 1970, 121), allied with the much earlier (c. tenth century BC) rectangular post structures from Redwick in the Gwent levels (Bell *et al.* 2000, 292), may suggest a localised Late Bronze Age tradition for such buildings.

Previous analyses of the regional Iron Age have suggested that many hillforts possess Early Iron Age or Late Bronze Age unenclosed phases. Marshall (1978), for example, argued for such phases at Salmonsbury, Shenberrow and Crickley, and the same has been proposed for Bathampton (Wainwright 1967) and Nottingham Hill. In all cases the evidence is limited and open to debate. At Crickley, the unenclosed phase appears to be a laying-out bank (Dixon 1994) and that at Shenberrow is also uncertain. The evidence from Bathampton is similarly limited, but the few post holes uncovered could conceivably represent some form of unenclosed phase prior to the enclosure of the hilltop. At Salmonsbury, the evidence is limited to possible early sherds from beneath the rampart. Recent excavations to the west of Salmonsbury (see below) imply that the earlier unenclosed settlement may have spread as far as this area, although Dunning's excavations (1976) appear not to have revealed Early Iron Age features. The Early Iron Age pottery from outside the ramparts at Burhill (Marshall 1989) is perhaps more convincing as evidence for an unenclosed phase or of activity beyond the main enclosure, but emphasises the need to look beyond hillfort boundaries in order to detect unenclosed phases or extra-mural

settlement.

Non-hillfort settlement

Our knowledge of non-hillfort settlement has, until recently, been very poor, but has begun to improve in the last fifteen years as a result of the growth in rescue excavation. The evidence, however, remains fragmentary, with older excavations frequently lacking crucial details about the nature or context of finds, whilst more recent evaluations produce tantalising but limited information.

In the upper Thames valley, Roughground Farm has an Early Iron Age unenclosed roundhouse, situated within a field system (Allen *et al.* 1993, 9). A similar site can be seen at Butler's Field (Boyle *et al.* 1998) with another unenclosed roundhouse associated with a pit alignment and linear boundaries; nearby at the Lodgers, there is further activity (Darvill *et al.* 1986). The Late Bronze Age site at Shorncote consists of unenclosed roundhouses representing a number of phases of settlement that shifted across the gravels (Hearne and Heaton 1994; Hearne and Adams 1999), and closely resembles the early first millennium BC field systems and unenclosed settlements known from further east in the Thames valley (Moore and Jennings 1992; Yates 1999; 2001). At Bourton-on-the-Water, recent small-scale investigations have located a number of probable Early Iron Age features (e.g. Nichols 1999). The available information is as yet limited, but the site appears to comprise an unenclosed settlement located on a low gravel ridge in the floodplain of the Windrush valley.

There is growing evidence of earlier first millennium BC land use in the lower Severn and north Avon valleys, long regarded as largely devoid of settlement at this period. At Hucclecote, for example, four or five post-built roundhouses of Late Bronze Age or Early Iron Age date have been excavated (Thomas *et al.* 2003),⁴ providing a possible pointer to the type of site that awaits discovery on the Severn gravels in the future. The site has three radiocarbon dates falling between the eighth–fifth centuries BC,⁵ implying that occupation may have overlapped with Crickley Hill, although the problems with calibration at this period preclude certainty. Hucclecote appears likely to represent the same type of unenclosed, spreading settlement as Shorncote and Roughground Farm.

Other potential Early Iron Age activity is seen at Sandy Lane, Cheltenham (Leah and Young 2001); Saintbridge and Crypt Grammar School, Gloucester (Dunning 1933; Darvill and Timby 1986); and Ireley Farm, Stanway (Saville 1984, 154). At Dumbleton, a number of Late Bronze Age or Early Iron Age pits are thought to represent an unenclosed settlement (Coleman and Hancocks forthcoming). Frocester also has some evidence of Early Iron Age activity including a trackway and a Late Bronze Age linear (Price 2000). At Beckford, the situation is less clear. Whilst some claim an Early Iron Age phase (Napthan *et al.* 1997, 18), the enclosures excavated by Britnell and Oswald are of Later Iron Age date; there was a Late Bronze Age linear on Britnell's site, but no indisputably Early Iron Age features (Oswald 1970–2; Britnell 1974). Finally, to the west of the Severn, an unenclosed Late Bronze Age and Early Iron Age settlement was uncovered at Thornwell (Hughes 1996). The pottery and a radiocarbon date imply that the site is of similar date to Crickley and Hucclecote.

From this limited evidence a broad pattern nonetheless emerges. Late Bronze Age sites and linear land division are reasonably plentiful on the river gravels; activity then falls away in the Earlier Iron Age, only to increase again in the Later Iron Age, in the form of enclosure, as at Wyre Piddle (Napthan *et al.* 1997) and Beckford. Either the lack of Earlier Iron Age sites is genuine, or material of this date is much harder to recognise, whilst Late Bronze Age and particularly Later Iron Age sites are more visible. In the current state of knowledge, the latter possibly may well be the more likely.

Early Iron Age material is notably rare on the Cotswolds, even in comparison to the Severn and Avon valleys. The lack of Early Iron Age sites on the route of the A417/A419 has already been mentioned. A La Tène I brooch and other finds imply the presence of a site of fifth or fourth century BC date at Winson (Cox 1985). Other possible sites include Kings Beeches, Siddington, and Barnsley Park (Saville 1984, 154), but in each case the evidence is restricted to a few poorly dated and provenanced sherds. A radiocarbon date of 770–520 cal. BC from charred timber in a roundhouse post hole at The Park, Guiting Power, seems overly early for a conjoined enclosure of this type; on other evidence this site is no earlier than the fifth or fourth centuries BC (Marshall 1995).

Few Later Iron Age sites on the Cotswolds show evidence of continuity from the earlier period (e.g.

Marshall 1995; Parry 1998; Mudd *et al.* 1999); most of the enclosed settlements, for example, appear to emerge around the fourth century BC (see below). The present evidence appears to indicate that there was limited Early Iron Age settlement on the Cotswold plateau. Although the lack of early material may partly be explained by the nature of the recording, it could also reflect a real lack of activity on the Cotswold Hills prior to the Later Iron Age. Such gaps in occupation have been noted elsewhere and may indicate that in some areas of southern Britain, Early Iron Age settlement, in common with Late Bronze Age activity (Yates 2001), tended to focus on the main river valleys.

Apart from the enclosed hilltop sites mentioned above, the region appears to lack the kind of enclosed settlements of Late Bronze Age and Early Iron Age date found in Wessex (Cunliffe 2000, 152) and which occur in the Severn–Cotswolds in the Later Iron Age. To the north of the study area, the enclosure at Rytonon-Dunsmore, Warwickshire was initially attributed to the Late Bronze Age (Bateman 1976), but has since been reinterpreted as Late Iron Age (Hingley 1996).

To the south and east, Early Iron Age enclosures do occur, including the D-shaped example at Longbridge-Deverill Cow Down (Hawkes 1994). The recently excavated enclosure at Groundwell West is of Early Iron Age date (Walker *et al.* 2001), and yielded pottery forms that compare with phase 3b at Crickley Hill (Elsdon 1994). This suggests a date spanning the sixth–fifth centuries BC (*ibid.*, 43), with the enclosure going through a number of modifications. Although the site appears chronologically discrete from those further to the north, the overall sequence appears to be broadly similar, the first, early phase unenclosed; the final phase a small D-shaped enclosure, matching the emergence of the multivallate enclosure at nearby Groundwell Farm around the fifth century BC (Gingell 1981). This could support the hypothesis of a more general transition from unenclosed to enclosed settlement taking place in the middle of the first millennium BC.

Land division

The linear ranch boundaries so familiar from Wessex are not as apparent within the Severn–Cotswold study area. There is, however, growing evidence from all parts of the region that by the Late Bronze Age the landscape was being divided up. The Late Bronze Age ditch from Frocester has been shown to extend for some hundreds of metres across the gravel terrace (E. Price pers. comm.), and similar linear boundaries are known from south Worcestershire, at Beckford (Britnell 1974) and Wyre Piddle (Napthan *et al.* 1997).

In the upper Thames valley, Early Iron Age pit alignments are well represented at Ashton Keynes (Hey 2000) and around Lechlade, at Butler's Field (Boyle *et al.* 1998) and the Memorial Hall (Thomas and Holbrook 1998), along with linear land divisions at Roughground Farm (Allen *et al.* 1993) and Butler's Field. Boyle *et al.* (1998) have convincingly argued that these linear boundaries combined to form organised landscapes on the gravel terraces. A number of other linear ditches and field systems have been suggested to be of Late Bronze Age date, such as Shire Ditch – traditionally thought to be medieval in date (Bowden 2000; Field 2000, 17).

These linears point to a significant level of landscape organisation by the Late Bronze Age/Early Iron Age and imply that many of the settlements were integrated into complex systems of land division. Growing evidence from both the Thames and Severn valleys implies that the gravel terraces in particular were being divided up by a variety of linear boundaries and that these may have formed complex field systems (cf. Yates 1999; 2001; Bradley and Yates this volume). This reflects the pattern noted by Shotton (1978) and Brown (1982) of land clearance around the end of the Late Bronze Age.⁶

Overview of settlement and landscape in the earlier first millennium BC

Despite the limited nature of the evidence, some broad generalisations can be made about earlier first millennium BC settlement. The settlement record appears generally to comprise enclosed hilltop sites, some of which may have had earlier unenclosed phases, and a variety of unenclosed settlements along the main river valleys. There appears to be little evidence of smaller

enclosed settlements from this period.

In the major valleys, at least, the landscape was already divided up in many places by the Late Bronze Age, with an apparent focus of settlement on the gravel terraces. Unless we can envisage a longer continuum from the Late Bronze Age to the 'Middle' Iron Age, many sites appear, however, to show a hiatus of occupation in the Early Iron Age, a pattern also noted in the Thames valley (Lambrick 1992, 83). In some cases, this may be due to a failure to recognise sites, either owing to the need to push the chronologies of pottery types beyond their current boundaries, or – perhaps more likely – to the ephemeral nature of Early Iron Age activity.

The potential invisibility of whole periods as a result of adopting inappropriate excavation strategies or taking a myopic view of the evidence should not be underestimated. Until the 1960s the Severn and (north) Avon valleys were thought to have been uninhabitable marsh in the Iron Age (e.g. Hencken 1938, 1), but these areas have since yielded plentiful evidence for Later Iron Age activity, primarily in the form of cropmarks (e.g. Britnell 1974; Dinn and Evans 1990). Due to the lack of enclosures, geophysics and aerial reconnaissance may not be as useful for finding earlier first millennium BC sites, a problem which the presence of alluvium covering the site at Hucclecote (Thomas *et al.* 2003) and those in the Avon Levels (Gardiner *et al.* 2002) can only compound.

In both the Late Bronze Age and Early Iron Age, the emphasis in the river valleys seems to be on unenclosed sites and on creating field boundaries at the expense of defining the domestic sphere. Field boundaries occur in the form of both linear ditches and pit alignments, whilst the corresponding lack of boundaries around roundhouses and settlements is notable.

The Early to Later Iron Age transition

This earlier settlement pattern is in marked contrast to the Later Iron Age. Fundamental changes seem to have taken place in all forms of society around the fourth century BC, with settlement in all areas becoming much more visible, coinciding with the use of the 'Middle' Iron Age wares, including Malvern stamped pottery.

By the fifth century BC, the early hillforts such as Crickley Hill had been abandoned (Dixon 1994), but around this time and

slightly later, a new group of hillforts emerged in their place. A radiocarbon date from the base of the main ditch at Uley Bury (Saville 1983) suggests that it was established around the fourth century. Pottery and radiocarbon dates from Conderton (Thomas 2005), Bredon (Hencken 1938), Stokeleigh (Haldane 1975) and Midsummer Hill (Stanford 1981)⁷ amongst others, suggest that they too emerged in the fifth or fourth centuries BC.

Around the same time, the rectilinear, and other, enclosure forms, which are such a characteristic feature of the Iron Age in the Cotswolds and West Midlands, also appeared (Fig. 3). The radiocarbon dates from enclosures in and near the region suggest that they emerged no earlier than the mid-late fourth century BC and continued throughout the Later Iron Age (Fig. 4). Moreover, several enclosures have yielded 'Middle' Iron Age wares from their initial phases, indicating that this type of pottery was already in circulation when enclosure occurred; they include Frocester (Price 2000) and Guiting Power (Saville 1979) in Gloucestershire; Wyre Piddle (Napthan *et al.* 1997), Beckford I and II (Britnell 1974; Oswald 1970–72) and Brant Farm in Worcestershire; and Cradley in Herefordshire (Hoverd 2000).

The 'Middle' Iron Age pottery in question comprises a variety of local (usually) limestone-tempered wares and regional wares from the Malvern area (Peacock 1968; Morris 1985). Morris suggested a date in the fifth to fourth centuries BC for the earliest Malvern wares, but the growing number of radiocarbon dates for 'Middle' Iron Age pottery, including the Malvern wares (Fig. 5), suggests a slightly later date, around the fourth century BC (with use in some cases probably

continuing up to the first century AD). This accords with the revised dating for 'Middle' Iron Age wares at Danebury, now regarded as emerging between the mid fourth and early third century BC (Cunliffe 1995, 18). This being so, those enclosures without radiocarbon dates also seem unlikely to be much earlier than the fourth century BC.

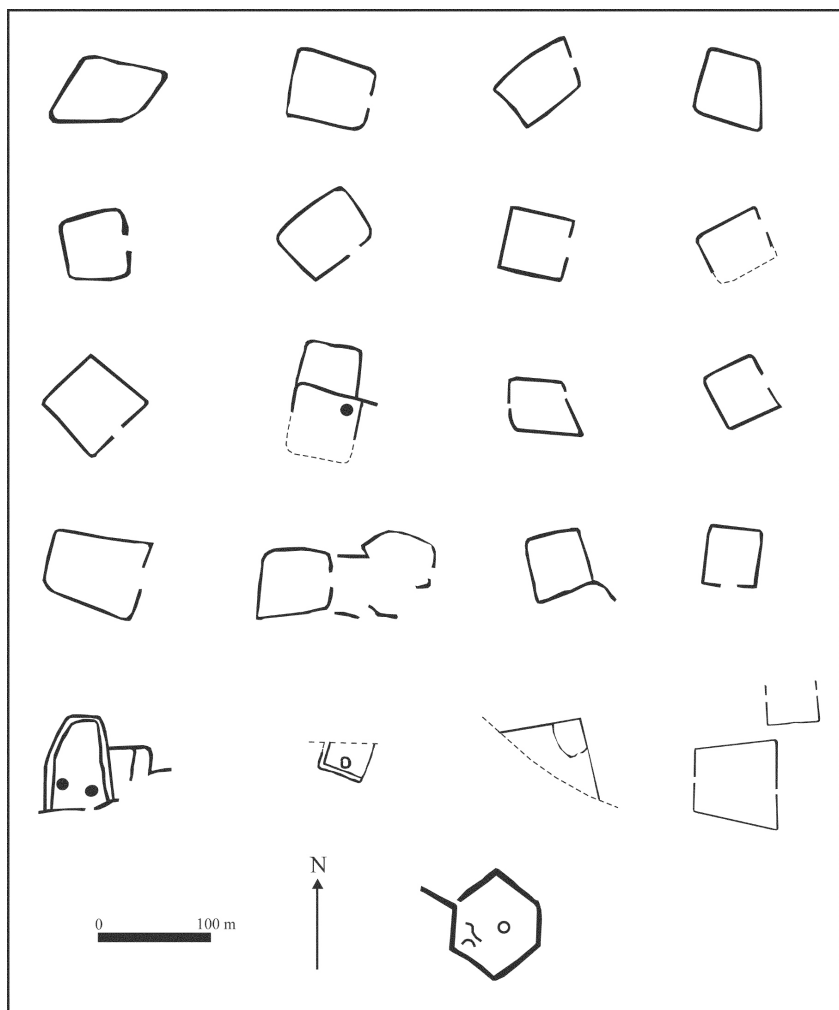


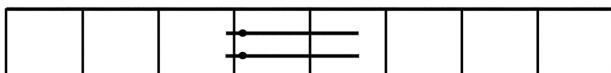
Fig. 3. Plans of known and probable Later Iron Age enclosures from the Cotswolds and Bredon Hill environs.

The emergence of these enclosed sites was accompanied by other changes including the adoption of storage pits, for which the dating evidence – albeit more limited – also centres on the mid-late fourth century BC (Moore 2003b). Utilisation of marginal areas also appears to become more intensive. Evidence of this includes the buildings at Goldcliff in the Gwent Levels, dating between the fifth and third centuries BC (Bell *et al.* 2000); the emergence of the lake villages at Meare East and West in the third century BC (Haselgrove

1997); and the establishment of sites such as Hallen, possibly slightly later, in the Avon Levels (Gardiner *et al.* 2002).

This is not to suggest that these areas were unexploited in the earlier first millennium BC, as shown by the presence of Late Bronze Age and Early Iron Age features, including trackways and buildings, in both the Somerset and Gwent Levels (Coles and Coles 1986, 132; Whittle 1989; Bell *et al.* 2000). However, from around the fourth century BC onward exploitation is far more visible archaeologically. This process was not necessarily sudden, but marks an apparent increase in settlement density and diversity of land use over the Later Iron Age. Such increased exploitation of areas that were used in less visible ways in the Early Iron Age may represent an increased pressure on land and/or inherent social changes.

700 600 500 400 300 200 100 BC 0 AD 100



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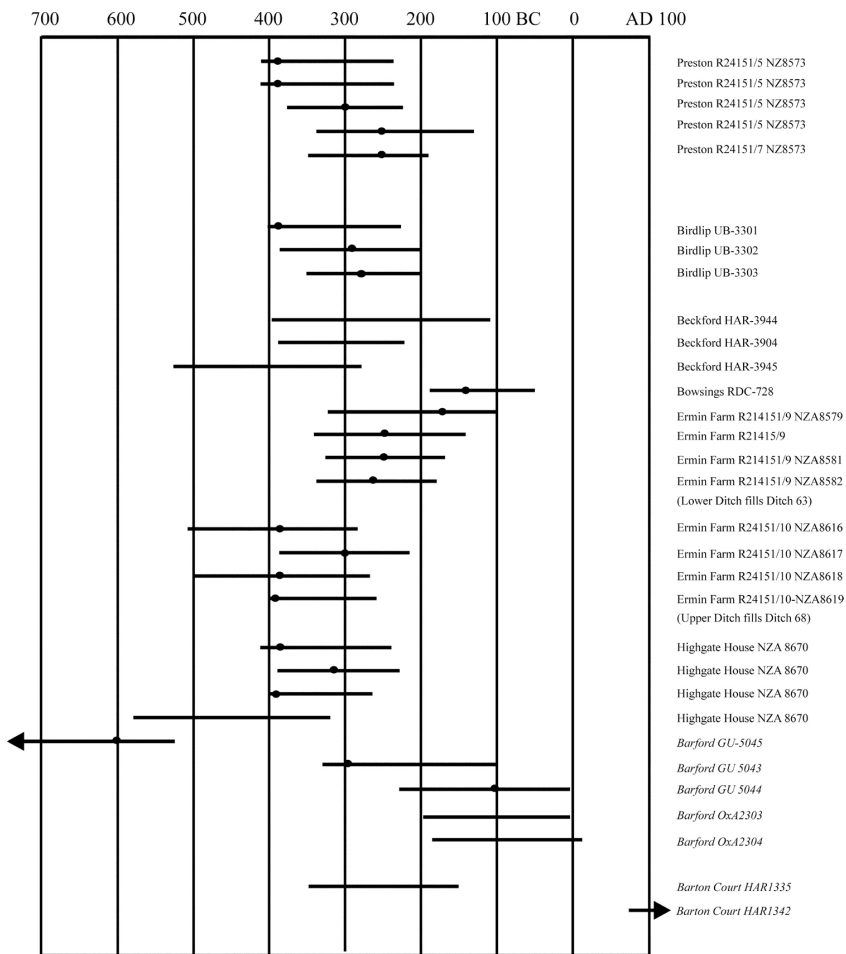


Fig. 4. Calibrated radiocarbon dates from Later Iron Age enclosures (one sigma). Sites in italics are outside the study area.

Another pointer to the extent of the changes is the distribution of findspots of 'Middle' Iron Age pottery, which contrasts markedly with that of earlier first millennium BC forms. In part, this might reflect the long use of the 'Middle' Iron Age wares, which in some cases continued in use into the early Roman period (Spencer 1983; Timby 1999; Moore forthcoming). However, the Late Bronze Age/ Early Iron Age finger-impressed wares also had a long period of circulation, potentially from c. 1200 BC to as late as the fourth century BC (Moore 2003b), but far fewer sites produce such material.

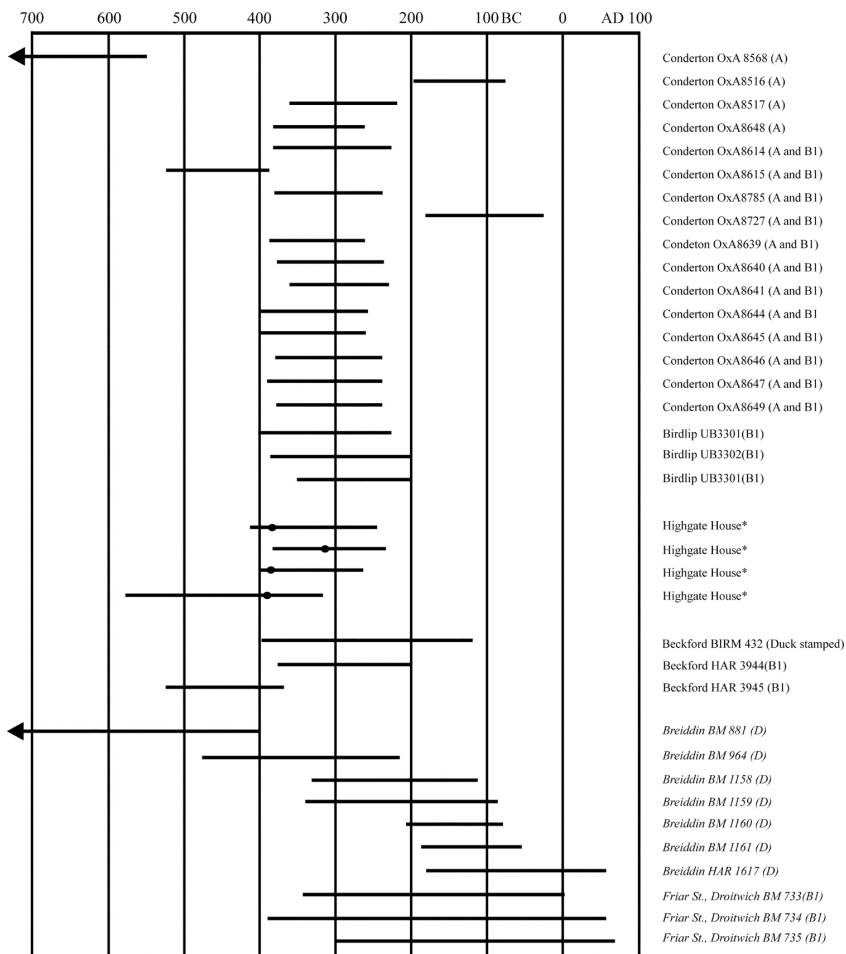


Fig. 5. Calibrated radiocarbon dates associated with Malvern A, B1 and D wares (one sigma). The Highgate House dates are associated with a mixture of limestone- and shell-tempered wares and with some Malvern A and B1 ware.

This dramatic increase in the visibility and extent of settlement and land use in the Later Iron Age must surely be associated with radical social changes. What were these changes and how should we explain them? First however we need to examine the relationship between the Later Iron Age settlement pattern and the landscape of the earlier first millennium BC.

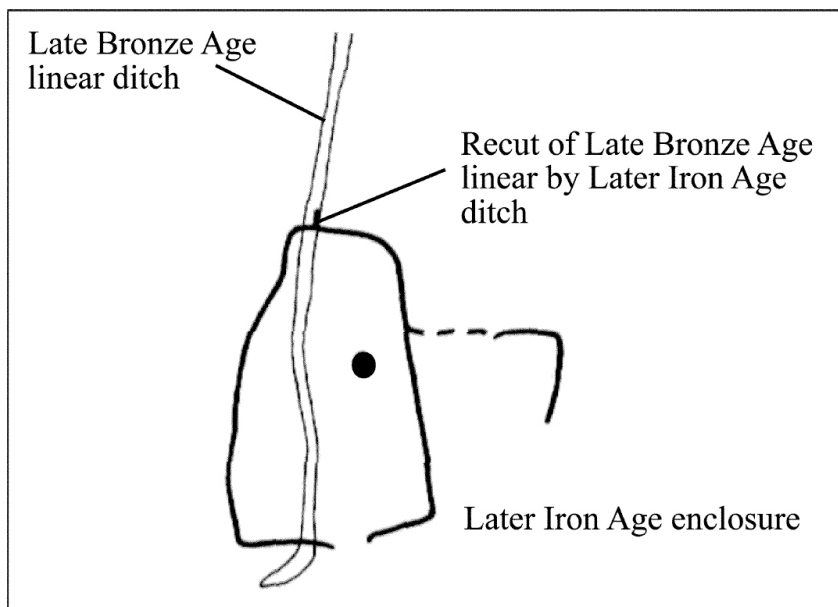


Fig. 6. Frocester, showing the Late Bronze Age linear beneath the enclosure (after Price 2000).

The relationship of later settlement to the earlier first millennium BC landscape

Other evidence suggests that, within this overall shift in settlement form, more complex changes were taking place. Despite the general discontinuity between the early and later periods, there is evidence at a number of locations that the Later Iron Age settlement pattern was often constructed in relation to earlier landscapes. This may be seen in the orientation and organisation of the landscape. As noted earlier, by the Late Bronze Age or Early Iron Age, much of the landscape had been divided up by linear boundaries. There are indications that this organisation of the landscape may have remained significant in the Later Iron Age and that, despite the radical changes in settlement architecture and possibly social structure, the land divisions remained important, even if no longer strictly 'in use' (Yates 1999; Bradley and Yates this volume).

One possibility is that local communities used these land divisions to affirm their previous control of the landscape. At Frocester, the junction between the linear and trackway of Late Bronze Age and

Early Iron Age date was superseded by a Middle Iron Age enclosure positioned over the linear but oriented the same way (Fig. 6). The enclosure boundary re-used the Late Bronze Age ditch, which was re-cut and linked to the enclosure by a smaller ditch. The enclosure was placed adjoining the trackway, maintaining this as a significant route into the Later Iron Age. Potentially similar relationships exist at Wyre Piddle and Beckford where Later Iron Age enclosures were constructed adjacent to Late Bronze Age linears.

Price (2000, 43) notes the high proportion of Fabric 3 pottery from the junction of the two Frocester linears (Fig. 7). Timby (1999, 126) proposes an Early–Middle Iron Age date for the pottery, which Price suggests might indicate Early Iron Age settlement beyond the excavated area. An alternative, however, would be to see this find as a special deposit marking a significant point in the landscape, and the placing of the enclosure as showing a conscious awareness and respect for the earlier land divisions.

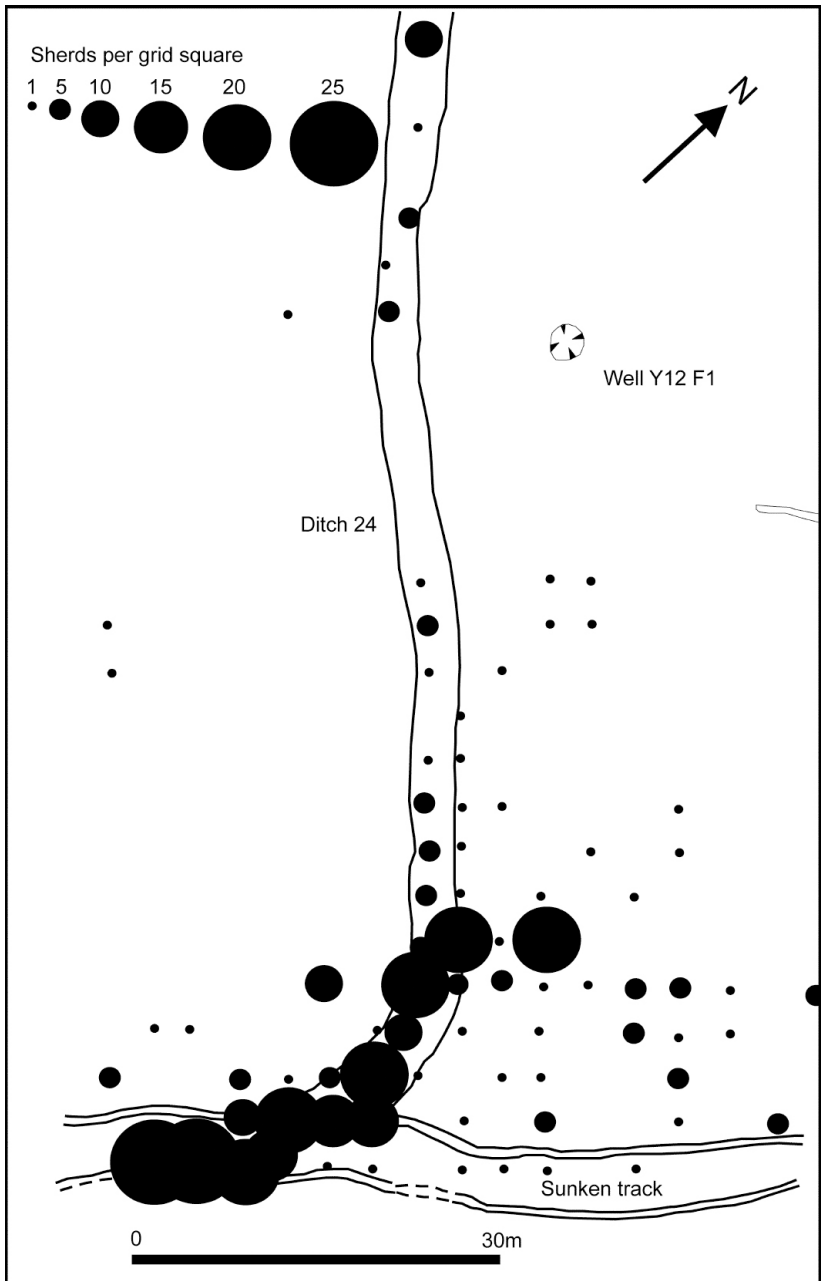
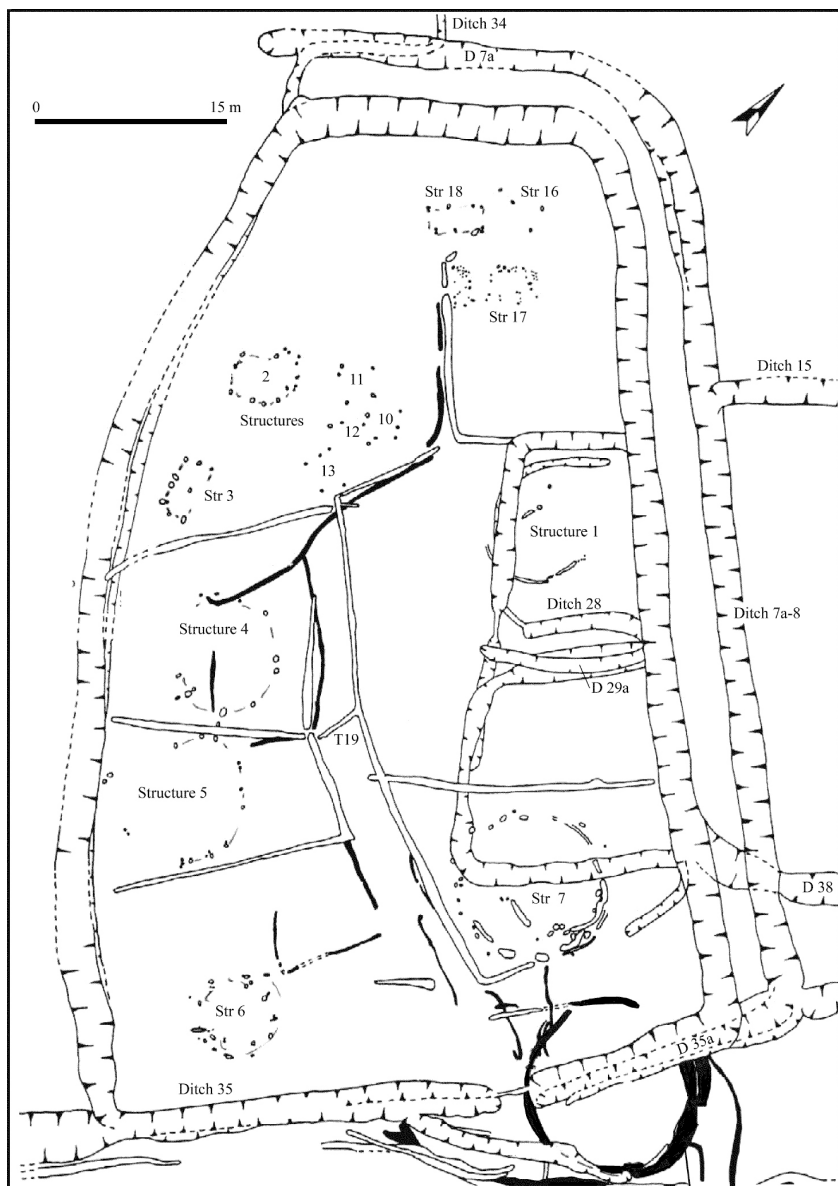


Fig. 7. Frocester: concentration of Early Iron Age pottery and its relationship to the Late Bronze Age linear and Early Iron Age sunken track (after Price 2000).

The placement of Later Iron Age enclosures into the nodes of

existing field systems and the importance of such nodes have been noted elsewhere. Taylor's (1997) study of settlement at Maxey in the East Midlands, for example, has shown how enclosures were placed at the junctions of boundaries of earlier field systems. Closer to the study area, the location of the Later Iron Age enclosure at Barford Park, Warwickshire (Cracknell and Hingley 1994) adjacent to an earlier linear may also be significant. Wigley (2002) has noted a similar phenomenon in the Welsh Marches, where a number of enclosures apparently relate to earlier linear boundaries. In such cases, it may point to recognition of the importance of earlier land divisions.



Possible roundhouse under enclosure ditch

Fig. 8. Frocester: possible roundhouse beneath the main enclosure ditch (after Price 2000, with additions).

In many cases, the dating suggests a hiatus between the two. Nevertheless, even if many of the Late Bronze Age field systems

were out of use in the Iron Age, as Yates (1999) has suggested for the Thames valley, many are likely to have remained as visible landscape boundaries. The existence of Middle Iron Age boundary systems respecting Bronze Age barrows as landscape markers, as at Preston (Mudd *et al.* 1999), could support the idea that Bronze Age and Early Iron Age field systems retained a role into the later first millennium BC. In addition, the Frocester evidence implies that certain boundaries were directly reused.

Another site where earlier linear ditches may have retained some significance is Roughground Farm. A crouched inhumation, with a radiocarbon date of 350–40 cal. BC, was interred in the silted up ditch of an Early Iron Age linear field system (Allen *et al.* 1993). No evidence of Middle Iron Age settlement was recovered in the immediate vicinity, suggesting that the burial was a conscious decision by a community living some distance away to re-use this boundary. The boundary may have remained as a significant feature, at least psychologically, if not physically.

In some cases, Middle Iron Age enclosures may not represent entirely new settlements, but rather a more visible manifestation of existing Early Iron Age communities. Frocester may be such an example (Fig. 8). An apparent roundhouse below the enclosure ditch suggests the possibility of an unidentified unenclosed phase preceding the Middle Iron Age enclosed settlement. Along with the early pottery already mentioned, and a possible Early Iron Age rectangular structure to the west of the site (Price 2000, 48), this might suggest the existence of an amorphous, less well-defined settlement in the area. By around the fourth century BC, this community felt the need to create a more permanent marker in the landscape.

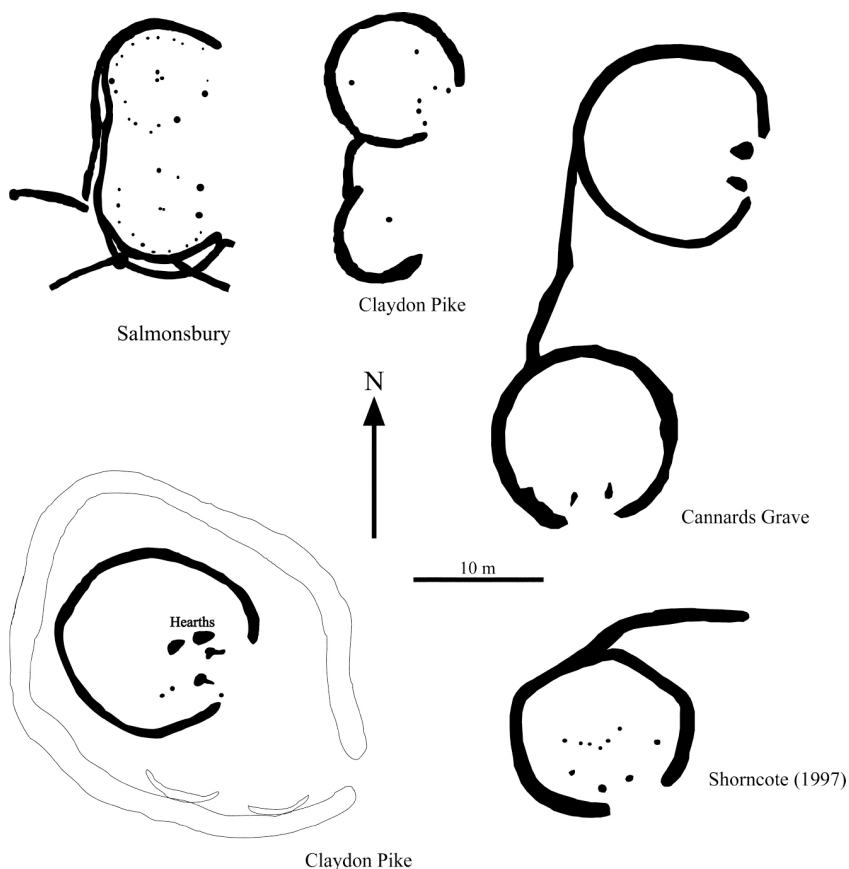


Fig. 9. Later Iron Age 'enclosed' roundhouses in the Severn–Cotswolds (source Moore 2003b).

A tendency towards unenclosed earlier settlement followed by the emergence of smallish enclosures in the Middle Iron Age appears to be repeated across the West Midlands. Jackson (1999) and Wigley (2002) have both noted a similar phenomenon further north in the Welsh Marches, and Warwickshire has comparable evidence (Hingley 1996). Enclosures such as Rollright (Lambrick 1988) and Wasperton (Hingley 1996), similar to those seen further south, also appear around this time.

This contrasts somewhat with the pattern noted in Wessex, where a variety of enclosed settlements existed from the early period and a number of hillforts continued to be occupied from the Early Iron Age onwards (Cunliffe 1991; 2000). However, the fourth century BC

was also a period of change in Wessex, with the move to ‘developed’ hillforts and new settlements (Cunliffe 2000, 202). The pattern is by no means uniform in the study area either, with a number of sites in northern Somerset showing evidence of continuity between the Early and Middle Iron Age (e.g. Morris 1988). This may indicate that these processes of change were both restricted to the Severn valley and the Cotswolds, and complex.

Explanations for change

Despite the complexity of the archaeological record, the similarity in developments across the West Midlands may well imply a comparable process of social change taking place across a large part of the region in the middle of the first millennium BC. The growing complexity and diversity of settlement is matched by an increased emphasis on the creation and maintenance of impermeable and more visible boundaries around settlements, contrasting with the unenclosed settlements of the earlier period. There is a shift away from bounding landscapes in the Late Bronze Age to an ever-increasing focus on bounding communities in the Later Iron Age. Such radical shifts in the perceptions of space and layout of settlement must surely reflect a transformation in society and/or community organisation.

These changes are most marked by the widespread emergence of settlement enclosures. However, this new expression of identity may not have been restricted to the settlement boundaries, being also reflected in the definition of individual houses or compounds within, so-called, unenclosed settlements. Examples of roundhouses within their own enclosure include Claydon Pike House I, in the upper Thames valley (Fig. 9; Hingley and Miles 1984); Hallen in the Severn estuary (Gardiner *et al.* 2002); and, less certainly, Salmonsbury – where at least two of the excavated roundhouses were situated within a conjoined enclosure consisting of a shared drainage ditch (Dunning 1976, fig. 2). Despite their so-called unenclosed nature, the presence of roundhouses defined within marked ditched boundaries contrasts with the predominantly post-built structures of earlier first millennium sites (Fig. 10). This contrast has been observed elsewhere, for example in East Anglia, where a similar chronological differentiation in house form has

been proposed (Martin 1999, 69), whilst the emergence of conjoined houses is recognised as being a generally Later Iron Age phenomenon (Bradley 1984, 141).

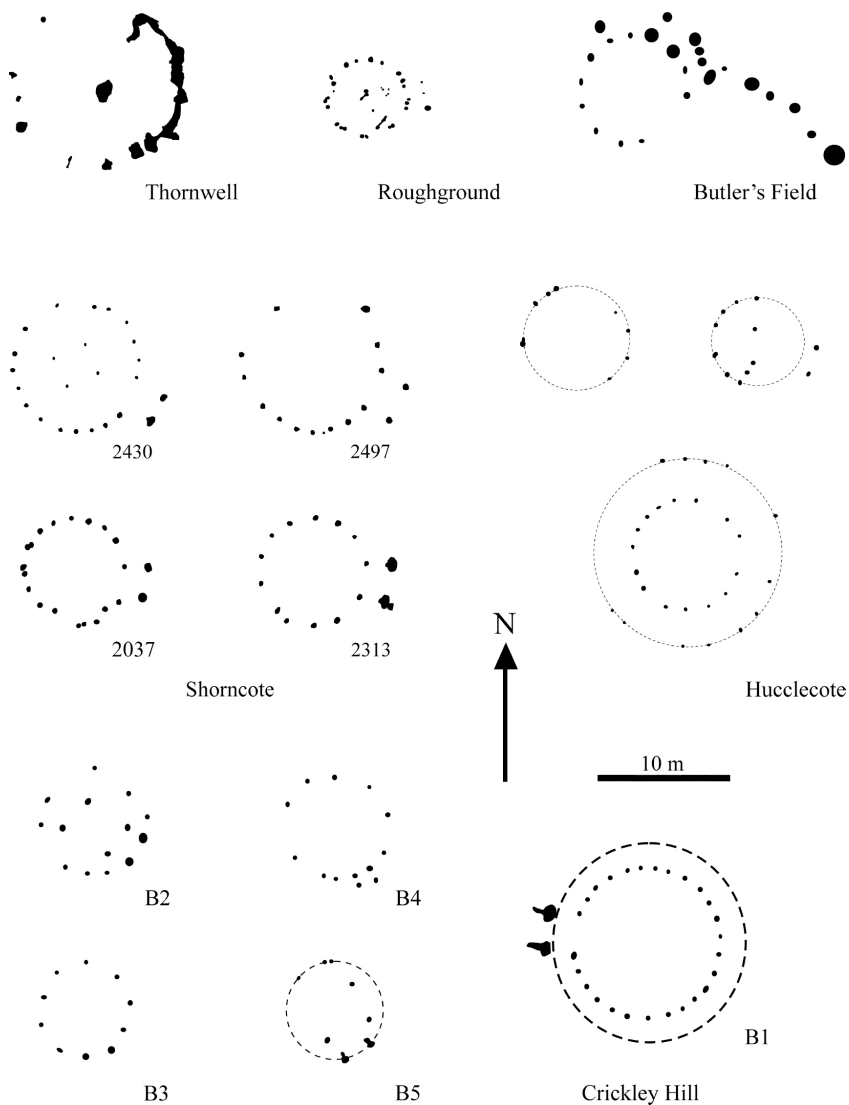


Fig. 10. Late Bronze Age/Early Iron Age post-built roundhouses in the Severn-Cotswolds (source Moore 2003b).

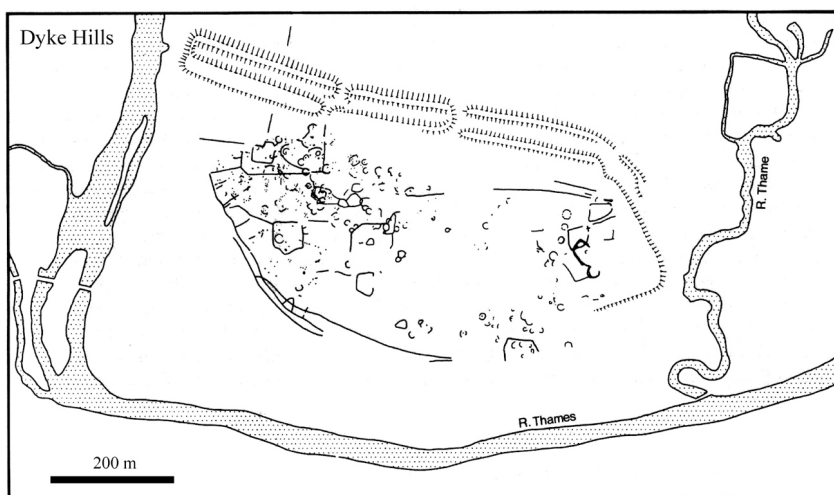
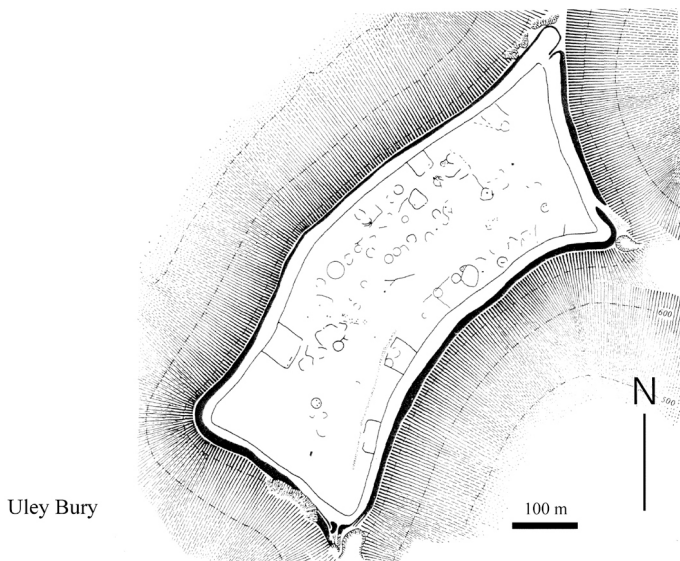


Fig. 11. Plans of Uley Bury (above) and Dyke Hills (below), showing internal enclosures (after Hampton and Palmer 1977; Hingley and Miles 1984).

Increased internal division is also apparently a feature of some Later Iron Age hillforts. At Uley Bury and Dyke Hills (Fig. 11), the cropmarks indicate a variety of internal enclosures and divisions within the settlement. The same perhaps can be seen at Salmonsbury, where there are indications that the interior was

divided into distinct units. In contrast, those earlier first millennium BC sites with sufficiently large excavated areas, such as Crickley Hill and Shorncliffe, show little evidence of internal division between houses.

These internal boundaries indicate that even within these larger 'communal' monuments, activities or household groups required their space to be divided from other parts of the site. Whilst the partitioning of space within hillforts has been noted elsewhere, as at Danebury, this is usually restricted to broader divisions between storage and housing (Cunliffe 1984a), rather than the splitting up of smaller spaces for particular activities. Such subdivision is perhaps more reminiscent of Late Iron Age *oppida* on the Continent, than of earlier hilltop enclosures.

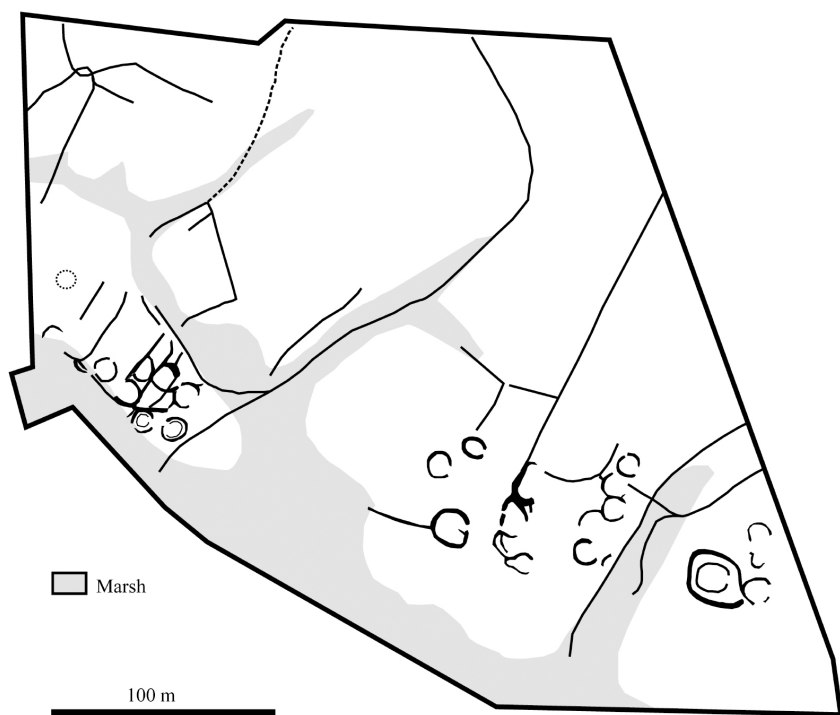


Fig. 12. Claydon Pike, showing 'unenclosed' roundhouses bounded by wet marshy areas (source Moore 2003b).

Whilst these 'enclosing ditches' may have fulfilled functional requirements both on unenclosed sites and hillforts, they are likely

to have been bound into social concepts of space (Bowden and McOmish 1987; Hingley 1990). At Claydon Pike House I, for example, the ditches appear larger than strictly necessary. If also full of water, these features would have been an impressive means of dividing up space both physically and psychologically, creating distinct activity areas. If these large drainage gullies were purely functional, one might reasonably ask why earlier circular structures in similar locations on the gravels, at sites such as Shorncote and Reading, did not require such large drainage ditches. The social role of drainage ditches and associated water management has also been noted at Later Iron Age sites in East Anglia where their multiple social, as well as functional, roles have been stressed (Evans 1997).

The location of sites like Claydon, situated on gravel islands bounded by marshy, periodically flooding streams, which may have formed sometimes permeable, sometime impermeable boundaries, further blurs the distinction between 'enclosed' and 'unenclosed' (Fig. 12). On these nominally 'unenclosed' sites, bounding space – both of the wider settlement and of household or activity areas – may in fact have been as important as on 'enclosed' sites.

The defining of individual structures within enclosures, or by gullies on unenclosed sites, can be interpreted as a growing emphasis on defining the household or kin group as a discrete element in the landscape (cf. Hingley 1984) or as defined social units (cf. Bradley 1984, 141). This raises a number of problems with regard to how households were defined, and how a change in household form would be represented in the archaeological record. Not least of the difficulties is whether there is actually a direct correlation between architectural form and social organisation. It could be argued that any such divisions between households in the early period, at sites such as Crickley or Shorncote, may have been cognitive rather than physical, or constructed in non-archaeologically visible ways. However, this does not undermine the fact that from around the fourth century BC, any previously cognitive boundaries now needed to be more physically expressed.

This change appears to represent a desire to define smaller social spaces more prominently (whether they represent individual 'households' or areas for certain activities), an aspiration that is not so apparent in the earlier first millennium BC. This may relate to an

increased tension over land and/or population pressure, themselves bound in to social developments (cf. Willis 1997, 207), including perhaps the growing importance of the household unit. We should, however, be wary of generalising about the nature of the household for any period or region of the Iron Age. The evidence we have makes it particularly difficult to ascertain the role of the household and reconstruct concepts of households or kin groups. Household organisation could have been similar throughout the first millennium BC. The one clear difference is the increased desire to define and distinguish the social unit in the Later Iron Age, or at least in a different way from that of the earlier first millennium BC. The enclosures found in the later part of the period appear to comprise the main habitation unit for relatively small communities, presumably based on the household.⁸ This contrasts with earlier settlements, both enclosed and unenclosed, where more households were incorporated, and the single household does not appear to be bounded in such an overt way.

This desire also manifested itself across settlement types, being seen within the bounded area of some hillforts and amongst the structures of unenclosed settlements. This implies that divisions between enclosed and unenclosed settlements, hillforts and non-hillforts were not as clear-cut in the later first millennium BC as is sometimes suggested. The presence of these 'enclosures' within hillforts and unenclosed settlements could well indicate that the process of 'enclosure' was not a defensive measure as a result of increased tension, but the consequence of an increased desire physically to mark social space. Nor need this imply that in the earlier period communities were necessarily egalitarian and in the latter highly stratified. Stratification and hierarchy may well have been expressed in different ways in the earlier period. Conversely, the increased emphasis on household enclosure does not mean that each household was necessarily organised into a rigid hierarchy of settlement and communities, or was socially exclusive from wider society. It may, instead, signify a wider shift of interest in expressing the identity and 'boundedness' of the household or kin group.

The process of constructing boundaries and their physical nature may have had further social implications for relationships within

and between communities. Numerous authors have suggested that the construction of enclosure boundaries was beyond the household group (e.g. Gosden and Lock this volume; Sharples this volume) and probably involved a variety of social relations between communities. Activities such as enclosure digging may have been communal projects, gifts of labour or relate to status (Moore 2007). Enclosure, then, need not be an 'excluding' process but in some instances an 'inclusive' one.

Elsewhere, similar changes in settlement and landscape have been interpreted as relating to changes in land tenure, perhaps precipitated by growing pressure on resources as a result of a growing population. Cunliffe (2000), for example, has explained somewhat similar changes in the Danebury environs as marking a shift from a system where land was communally owned and regularly redistributed, to one where land was in private ownership.

Could we explain the process seen in the Severn– Cotswolds in the same way? There is nothing to indicate that land was necessarily held in common in the region in the earlier period, or that ownership was less defined, but it might be suggested that in the later period, land tenure was more firmly expressed in relation to ownership by the household or kin group, and that the appearance of enclosures marked a desire to control these systems more overtly. There is a need, however, to be cautious in using essentially anachronistic terms, such as 'communal' and 'private', when discussing land tenure in the past. Without further work on this, it is very difficult to use the material record to suggest either 'communal' or 'private' systems of lands ownership.

Another element to consider here is the growing importance of regional social organisation. It is around this period that we see an increase in the importance of regionally exchanged pottery and an apparent move towards specialisation of some settlements. Morris (1985; 1994; Morris *et al.* 2005) and others (e.g. Hancocks 1999) have argued for predominantly localised pottery production in the earlier period with a shift towards regionally exchanged pottery in the Later Iron Age. The presence of such pottery on a variety of site types, from small enclosures to hillforts, implies that all communities were to some extent involved in the move to long-distance exchange (Morris 1994). This change marks a shift not just

in exchange systems, but also from local (household?) production to manufacture in apparently specialised and specific areas of the landscape (such as the Malvern Hills). As I have argued elsewhere, the growth of these more complex exchange systems may mark the emergence of broader concepts of identity and increased social interaction beyond the local community (Moore 2003b; 2007).

How then can these changes in material culture be related to settlement development? Could we argue that the enclosure of settlements marks a need for communities to define themselves in relation to the wider socio-economic groups expressed by these regional exchange systems, the increased contact with other groups forcing local communities to express their own identity more overtly? Further work is needed to explore the relationships between material culture production and exchange, and the perceptions of social space and organisation displayed in settlement architecture. What is clear is that radical social and economic changes took place at the end of the Early Iron Age and that these clearly had wide social implications and manifestations, which affected individuals and communities. These cannot be explained purely in terms of population increase or changes in land tenure, but need to be explored in more sophisticated ways.

Studying and identifying transitions

This brief examination of the Earlier–Later Iron Age transition has attempted to re-identify the period as one of transformation, which may have been relatively swift rather than gradual or highly localised. Transitions – and the way in which they are identified and perceived – long formed a core focus of research in later prehistory, yet in recent years they have been neglected, with processes of change being regarded as gradual and specific to individuals and communities.

Whilst recent studies have accepted the dynamism of individual communities in dictating change, the explanation of broader patterns in settlement and society has tended to remain the preserve of more processual models (e.g. Cunliffe 2000). Now, however, an increasing number of post-processual archaeologists are also accepting that broader patterns can be identified and may mark more general social changes (e.g. Hill 1997; Willis 1997); unlike

some of their predecessors, they also accept that the processes of change may be drawn out over decades or centuries, and that individual communities and regions often reacted in different ways.

The chronological problems associated with the period have often overshadowed the discussion of settlement and social change. The lack of refinement in radiocarbon calibration in the Early Iron Age and vagaries in pottery dating make identifying moments of change difficult. Even so, the creation of a broad chronological framework using such radiocarbon dates and pottery sequences as are available, is often sufficient for more general patterns and trends to be identified and analyzed, as I have sought to show here.

The process of change is not just a chronological process, but also a cultural one. Chronological identifiers are often themselves evidence of wider social change. As Willis (2006) puts it, 'The middle Iron Age is as much a cultural phenomenon as a chronological entity'. The relatively rapid move to new forms and sources of pottery and to new settlement forms and locations in the Severn-Cotswold region in or around the fourth century BC is as much related to social change and the adoption of new life-ways, as it is to social groups 'following' chronological changes.

Conclusions

The aim of this paper has been to highlight the changes in the settlement record between the earlier and later first millennium BC in the Severn-Cotswolds. The picture is undoubtedly complex, with each community and settlement creating and reacting to the processes of change in different ways and at different times. It is by no means a universal process throughout the region and different processes appear to be taking place to the south in Somerset (Barrett *et al.* 2000), Wiltshire, and Wessex (Cunliffe 2000). The variability in the quality of the archaeological record and the problems of pottery and radiocarbon chronologies all make it difficult to create a single narrative.

Despite these issues, it is essential that we re-engage with the broader material and social changes evident in the archaeological record of the first millennium BC. In particular, we need to explain the increased emphasis on enclosure in the Later Iron Age compared to earlier in the period. I have argued that this reflects an alteration

in the perceptions of space on the part of regional communities, a shift that was bound into a complex combination of population increase, changes in land tenure and the growth of larger socio-economic systems.

The recognition that similar developments took place across the West Midlands suggests that broader social and economic processes were underway, although at present we have little understanding of their nature and causes, and more work is required to establish quite how much of Britain these affected. It is essential, too, that we extend our enquiries beyond the changes in settlement architecture and land use on which this paper has focused. These are simply the changes that stand out most in the archaeological record. Many other changes took place at this period, in exchange systems, production and household form, all of which may be intimately bound with the developments seen on settlements and in the landscape.

Acknowledgements

My thanks to Colin and Rachel for inviting me to speak at the seminar and for discussion of many of the ideas presented here; to Phil Dixon for discussion of Crickley Hill; to Neil Holbrook and Annette Hancocks for information on Hucclecote and Dumbleton; to Julie Gardiner for information on Hallen; and to the staff at all the relevant SMRs and Units who assisted in my searches of their archives. I would also like to thank J.D. Hill and Mark Bowden for detailed and helpful comments on earlier drafts of this paper. This paper is based on research for my Ph.D. thesis (Moore 2003b), which was funded by the AHRB.

Notes

1. Due to the long use of so-called 'Middle' Iron Age wares (cf. Hill 1999; Timby 1999; Willis 2001) and the persistence of the relevant settlement forms, the term Later Iron Age will be used here for the whole of the period from the fourth century BC to the first century AD (cf. Haselgrove and Moore 2007)
2. The site has also yielded Early Iron Age pottery. A possible palisaded enclosure identified by a geophysical survey may represent an earlier (Late Bronze Age?) phase.

3. The earliest rampart has radiocarbon dates of 810–570, 490– 240 and 680–300 cal. BC (HAR-392–394). Elsdon (1994, 220) regards the pottery as indicating occupation from the eighth– sixth centuries BC. All radiocarbon dates used in this paper have been re-calibrated using OxCal v3.3 and are quoted here at one sigma unless otherwise stated.
4. Which may relate to earlier, possibly Late Bronze Age finds in the area (Clifford 1933, 331).
5. One roundhouse yielded a radiocarbon date of 720–450 cal. BC, whilst a pit associated with the roundhouses has dates of 710–400 and 710–420 cal. BC.
6. Radiocarbon dates from Warwickshire suggest increased alluvium at Pilgrim Lock on the River Avon at 1300–600 cal. BC and, further from the study area, on the River Arrow in Redditch, at 980–810 cal. BC (Shotton 1978). Brown (1982, 102) suggests dates between 1200 and 800 cal. BC for maximum terrace clearance close to Tewkesbury.
7. In arriving at a starting date of c. 470 BC for Midsummer Hill, Stanford (1981) places too much reliance on the single radiocarbon date from the first gate. This date has a very wide error margin and such precision is illusory.
8. Although this does not mean they were not bound in to wider social networks and larger ‘communities’ (Moore 2007).

Bibliography

- Allen, T., Darvill, T., Green, S. and Jones, M. 1993. *Excavations at Roughground Farm, Lechlade, Gloucestershire*. Oxford: Thames Valley Landscapes Vol. 1.
- Apsimon, A. 1977. Trial excavations at Burledge Camp in 1955, in P. Rahtz and E. Greenfield, *Excavations at Chew Valley Lake*, 168– 169. London: Department of the Environment Archaeological Report 8.
- Barrett, J., Freeman, P. and Woodward, A. 2000. *Cadbury Castle, Somerset. The Later Prehistoric and Early Historic Archaeology*. London: English Heritage Archaeological Report 20.
- Bateman, J. 1976. A late Bronze Age cremation cemetery and Iron Age/Romano-British enclosures, Ryton-on-Dunsmore, Warwicks, *Transactions of the Birmingham and Warwickshire Archaeological Society* 88, 9–48.
- Bell, M., Caseldine, A. and Neumann, H. 2000. *Prehistoric Intertidal Archaeology in the Welsh Severn Estuary*. York: Council for British Archaeology Research Report 120.
- Bevan, B. 1999. *Northern Exposure: Interpretative Devolution and the Iron Age in Britain*. Leicester: Leicester Archaeology Monograph 4.
- Bowden, M. 2000. *British Camp on Herefordshire Beacon*. Typescript report,

English Heritage.

- Bowden, M. and McOmish, D. 1987. The required barrier, *Scottish Archaeological Review* 4, 76–84.
- Boyle, A., Jennings, D., Miles, D. and Palmer, S. 1998. *The Anglo-Saxon Cemetery at Butler's Field, Lechlade, Gloucestershire, Vol. 1. Prehistoric and Roman Activity and Anglo-Saxon Grave Catalogue*. Oxford: Thames Valley Landscapes Monograph 10.
- Bradley, R. 1984. *The Social Foundations of Prehistoric Britain: Themes and Variations in the Archaeology of Power*. London: Longman.
- Britnell, W. 1974. Beckford, *Current Archaeology* 45, 293–297.
- Brown, A. 1982. Human impact on the former floodplain woodlands of the Severn, in M. Bell and S. Limbrey (eds), *Archaeological Aspects of Woodland Ecology*, 93–105. Oxford: British Archaeological Reports International Series 146.
- Champion, S. 1976. Leckhampton Hill, Gloucestershire, 1925 and 1970, in Harding 1976, 177–181.
- Clarke, S. 1993. *Settlement Patterns in the Cotswold-Severn Region 700 BC–AD 700*. Unpublished Ph.D. thesis, University of Bradford.
- Clifford, E. 1933. The Roman Villa near Hucclecote, Gloucester, *Transactions of the Bristol and Gloucestershire Archaeological Society* 55, 323–376.
- Coleman, L. and Hancocks, A.F. forthcoming. *Excavations on the Wormington to Tirely pipeline, 2000. Prehistoric, Romano-British and Anglo-Saxon activity at five sites by the Carrant Brook and River Ishbourne, Gloucestershire and Worcestershire*. Cirencester: Cotswold Archaeology Occasional Paper 2.
- Coles, B. and Coles, J. 1986. *Sweet Track to Glastonbury. The Somerset Levels in Prehistory*. London: Thames and Hudson.
- Cox, P.C. 1985. *The Past in the Pipeline. Archaeology of the Esso Midline*. Salisbury: Trust for Wessex Archaeology/Esso.
- Cracknell, S. and Hingley, R. 1993–4. Park Farm, Barford; Excavation of a prehistoric settlement site, 1988, *Transactions of the Birmingham and Warwickshire Archaeological Society* 98, 1–30.
- Cunliffe, B. 1984a. *Danebury. An Iron Age Hillfort in Hampshire, Vol. 2. The Excavations 1969–1978: the Finds*. London: Council for British Archaeology Research Report 52.
- Cunliffe, B. 1984b. The Iron Age in Gloucestershire, *Transactions of the Bristol and Gloucestershire Archaeological Society* 102, 2–9.
- Cunliffe, B. 1991. *Iron Age Communities in Britain* (3rd edn). London: Routledge.
- Cunliffe, B. 1995. *Danebury. An Iron Age Hillfort in Hampshire, Vol 6. A*

- Hillfort Community in Perspective*. York: Council for British Archaeology Research Report 102.
- Cunliffe, B. 2000. *The Danebury Environs Programme. The Prehistory of a Wessex Landscape, Vol. 1. Introduction*. Oxford: Oxford University Committee for Archaeology Monograph 48.
- Cunliffe, B. and Miles, D. (eds) 1984. *Aspects of the Iron Age in Central Southern Britain*. Oxford: Oxford University Committee for Archaeology Monograph 2.
- Darvill, T. 1987. *Prehistoric Gloucestershire*. Gloucester: Alan Sutton.
- Darvill, T. and Timby, J. 1986. Excavations at Saintbridge, Gloucester 1981, *Transactions of the Bristol and Gloucestershire Archaeological Society* 104, 49–60.
- Darvill, T., Hingley, R., Jones, M. and Timby, J. 1986. A Neolithic and Iron Age site at the Loders, Lechlade, Gloucestershire, *Transactions of the Bristol and Gloucestershire Archaeological Society* 104, 27–48.
- Davies, J. and Williamson, T. (eds) 1999. *Land of the Iceni: the Iron Age in Northern East Anglia*. Norwich: Studies in East Anglia History 4.
- Dinn, J. and Evans, J. 1990. Aston Mill farm, Kemerton: excavation of a ring ditch, middle Iron Age enclosure and a grübenhaus, *Transactions of the Worcestershire Archaeological Society* (Ser. 3) 12, 5–66.
- Dixon, P. 1976. Crickley Hill, 1969–1972, in Harding 1976, 162–175.
- Dixon, P. 1994. *The Hillfort Defences. Crickley Hill Vol. 1*. Nottingham: Department of Archaeology, University of Nottingham.
- Dunning, G.C. 1933. Report on pottery found in the Crypt Grammar school grounds, Gloucester during excavations 1931–32, *Transactions of the Bristol and Gloucestershire Archaeological Society* 55, 227–291.
- Dunning, G.C. 1976. Salmonsbury, Bourton on the Water, in Harding 1976, 76–118.
- Elsdon, S. 1994. The Iron Age pottery, in Dixon 1994, 203–241.
- Evans, C. 1997. Hydraulic communities: Iron Age enclosure in the East Anglian fenlands, in Gwilt and Haselgrove 1997, 216–227.
- Falconer, J.P.E. and Adams, B.S. 1935. Recent finds at Solisbury Hill Camp, near Bath. A Hallstatt–Early La Tène site, *Proceedings of the University of Bristol Spelaeological Society* 4, 183–211.
- Fell, C.I. 1961. Shenberrow Hill Camp, Stanton, Gloucestershire, *Transactions of the Bristol and Gloucestershire Archaeological Society* 80, 16–41.
- Field, D. 2000. *Midsummer Hill, a survey of the earthworks*. Typescript report, English Heritage.
- Gardiner, J., Allen, M., Hamiton-Dyer, S., Laidlaw, M. and Scaife, R. 2002. Making the most of it: late prehistoric pastoralism in the Avon levels,

- Severn Estuary, *Proceedings of the Prehistoric Society* 68, 1–40.
- Gerritsen, F. 2003. *Local Identities. Landscapes and Community in the Later Prehistoric Meuse–Demer–Scheldt region*. Amsterdam: Amsterdam Archaeological Studies 9.
- Gingell, C. 1981. Excavation of an Iron Age enclosure at Groundwell Farm, Blunsdon St Andrew, 1976–7, *Wiltshire Archaeology Magazine* 76, 33–75.
- Grant-King, D. 1967. Bury Wood Camp, excavations in the area of the south west opening, *Wiltshire Archaeology and Natural History Magazine* 62, 1–15.
- Gwilt, A. and Haselgrove, C. (eds) 1997. *Reconstructing Iron Age Societies*. Oxford: Oxbow Monograph 71.
- Hancocks, A. 1999. The pottery, in C. Parry, Iron Age, Romano-British and Medieval occupation at Gilders Paddock, Bishops Cleeve, Glos. Excavations at Gilders Paddock 1989 and 1990–1, *Transactions of the Bristol and Gloucestershire Archaeological Society* 117, 89–118.
- Haldane, J.W. 1975. The excavations at Stokeleigh Camp, Avon, *Proceedings of the University of Bristol Spelaeological Society* 14, 29–63.
- Hall, M. and Gingell, C. 1974. Nottingham Hill, Gloucestershire 1972, *Antiquity* 48, 306–309.
- Harding, D.W. (ed.) 1976. *Hillforts. Later Prehistoric Earthworks in Britain and Ireland*. London: Academic Press.
- Haselgrove, C. 1997. Iron Age brooch deposition and chronology, in Gwilt and Haselgrove 1997, 51–72.
- Haselgrove, C. and Moore, T. (eds) 2007. *The Later Iron Age in Britain and Beyond*. Oxford: Oxbow Books.
- Hawkes, S.C. 1994. Longbridge Deverill Cow Down, Wiltshire, House 3: A major roundhouse of the early Iron Age, *Oxford Journal of Archaeology* 13, 49–69.
- Hearne, C. and Adams, N. 1999. Excavation of an extensive Late Bronze Age settlement at Shorncote Quarry, near Cirencester, 1995–6, *Transactions of the Bristol and Gloucestershire Archaeological Society* 117, 35–73.
- Hearne, C. and Heaton, J. 1994. Excavations at a Late Bronze Age settlement in the Upper Thames valley at Shorncote quarry near Cirencester, 1992, *Transactions of the Bristol and Gloucestershire Archaeological Society* 112, 17–58.
- Hencken, T.C. 1938. The excavations of the Iron Age camp on Bredon Hill, Gloucestershire, 1935–1937, *Archaeological Journal* 95, 1–111.
- Hey, G. 2000. *Cotswold Community at Ashton Keynes*. Oxford: Oxford Archaeological Unit.
- Hill, J.D. 1997. The end of one kind of body and the beginning of another

- kind of body? Toilet instruments under 'Romanisation', in Gwilt and Haselgrove 1997, 96–107.
- Hill, J.D. 1999. Settlement, landscape and regionality: Norfolk and Suffolk in the pre-Roman Iron Age of Britain and beyond, in Davies and Williamson 1999, 185–207.
- Hingley, R. 1984. Towards a social analysis in archaeology: Celtic society in the Iron Age of the Upper Thames valley, in Cunliffe and Miles 1984, 72–88.
- Hingley, R. 1990. Boundaries surrounding Iron Age and Romano-British settlement, *Scottish Archaeological Review* 7, 96–103.
- Hingley, R. 1996. Prehistoric Warwickshire: a review of the evidence, *Transactions of the Birmingham and Warwickshire Archaeological Society* 100, 1–24.
- Hingley, R and Miles, D 1984. Aspects of the Iron Age in the Upper Thames Valley, in Cunliffe and Miles 1984, 52–71.
- Hoverd, T. 2000. Ridgeway, Cradley, Herefordshire, *West Midlands Archaeology* 43, 45–46.
- Hughes, G. 1996. *The excavation of a later Prehistoric and Romano-British settlement at Thornwell Farm, Chepstow, Gwent* 1992. Oxford: British Archaeological Reports British Series 244.
- Jackson, D. 1999. *Settlement and Society in the Welsh Marches during the First Millennium BC*. Unpublished Ph.D. thesis, University of Durham.
- Lambrick, G. 1988. *The Rollright Stones*. London: English Heritage Archaeological Report 6.
- Lambrick, G. 1992. The development of late prehistoric and Roman farming on the Thames gravels, in M. Fulford and E. Nichols (eds), *Developing Landscapes of Lowland Britain: the Archaeology of the British Gravels*, 78–105. London: Society of Antiquaries of London Occasional Paper 14.
- Leah, M and Young, C. 2001. A Bronze Age burnt mound at Sandy Lane, Charlton Kings, Gloucestershire: excavation in 1971, *Transactions of the Bristol and Gloucestershire Archaeological Society* 119, 59–82.
- Marshall, A. 1978. The pre-Belgic Iron Age in the Northern Cotswolds, *Transactions of the Bristol and Gloucestershire Archaeological Society* 96, 9–16.
- Marshall, A. 1989. The hillfort at Burhill, Buckland, Gloucestershire: evidence for occupation during the earliest phase of the Iron Age, *Transactions of the Bristol and Gloucestershire Archaeological Society* 107, 197–203.
- Marshall, A. 1995. From Iron Age to Roman: The Park and Bowsings sites at Guiting Power, *Glevensis* 28, 13–19.
- Martin, E. 1999. Suffolk in the Iron Age, in Davies and Williamson 1999,

- Moore, J. and Jennings, D. 1992. *Reading Business Park: a Bronze Age Landscape*. Oxford: Thames Valley Landscapes, The Kennet Valley Vol. 1.
- Moore, T. 2003a. Rectangular houses in the British Iron Age: squaring the circle, in J. Humphrey (ed.), *Re-searching the Iron Age*, 47–58. Leicester: Leicester Archaeology Monograph 11.
- Moore, T. 2003b. *Iron Age Societies in the Severn–Cotswolds: Developing Narratives of Social and Landscape Change*. Unpublished Ph.D. thesis, University of Durham.
- Moore, T. 2007. Life on the edge? Exchange, community and identity in the later Iron Age of the Severn–Cotswolds, in Haselgrove and Moore 2007, 41–61.
- Morris, E. 1985. *Salt and Ceramic Exchange in Western Britain during the First Millennium BC*. Unpublished Ph.D. thesis, University of Southampton.
- Morris, E. 1988. The Iron Age occupation at Dibble Farm, *Proceedings of the Somerset Archaeology and Natural History Society* 132, 23–82.
- Morris, E. 1994. Production and distribution of pottery and salt in Iron Age Britain: a review, *Proceedings of the Prehistoric Society* 60, 371–393.
- Morris, E.L., Marsden, P. and Williams, D. 2005. Pottery and briquetage, in Thomas 2005, 117–147.
- Mudd, A. Williams, R. and Lupton, A. 1999. *Excavations alongside Roman Ermin Street, Gloucestershire and Wiltshire. The Archaeology of the A419/A417 Swindon to Gloucester Road Scheme, Vol. 2*. Oxford: Oxford Archaeological Unit.
- Napthan, M., Hancocks, A., Pearson, E. and Ratkai, S. 1997. *Evaluation of proposed Wyre Piddle Bypass*. Typescript report, County Archaeological Services Hereford and Worcester County Council.
- Nichols, P. 1999. *An Archaeological Evaluation at Bourton-on-the-Water Primary School, Gloucestershire*. Typescript report, Gloucestershire County Council Archaeology Service.
- Oswald, A. 1970–2. Excavations at Beckford, *Transactions of the Worcestershire Archaeological Society* 3, 7–54.
- Parry, C. 1998. Excavations near Birdlip, Cowley, Gloucestershire 1987–88, *Transactions of the Bristol and Gloucestershire Archaeological Society* 116, 25–92.
- Parry, C. 1999. Excavations at Camp Gardens, Stow on the Wold, Glos, *Transactions of the Bristol and Gloucestershire Archaeological Society* 117, 75–88.
- Peacock, D.P.S. 1968. A petrological study of certain Iron Age pottery from Western England, *Proceedings of the Prehistoric Society* 34, 414–427.
- Pope, R.E. 2003. *Prehistoric Dwelling: Circular Structures in North and Central*

- Britain c. 2500 BC–AD 500. Unpublished Ph.D. thesis, University of Durham.
- Price, E. 2000. *Frocester: a Romano-British Settlement, its Antecedents and Successors*, Vol. 1: *The Sites*. Stonehouse: Gloucester and District Archaeological Group.
- Rahtz, P. 1956. Kings Weston Down Camp, Bristol, 1956, *Proceedings of the University of Bristol Spelaeological Society* 8, 30–39.
- Rahtz, P. and Barton, K. 1963. Maes Knoll Camp, Dudbury, Somerset. Excavations 1958, *Proceedings of the University of Bristol Spelaeological Society* 10, 9–15.
- Saville, A. 1979. *Excavations at Guiting Power, Gloucestershire 1974*. Cheltenham: CRAAGS Occasional Paper 7.
- Saville, A. 1983. *Uley Bury and Norbury Hillforts. Rescue Excavations at two Gloucestershire Iron Age Sites*. Bristol: Western Archaeological Trust Excavation Monograph 5.
- Saville, A. 1984. The Iron Age, in A. Saville (ed.), *Archaeology in Gloucestershire*, 140–178. Cheltenham: Cheltenham Art Gallery.
- Shotton, F.W. 1978. Archaeological inferences from the study of alluvium in the lower Severn-Avon valleys, in S. Limbrey and J. Evans (eds), *The Effect of Man on the Landscape: the Lowland Zone*, 27–31. London: Council for British Archaeology Research Report 21.
- Spencer, B. 1983. Limestone tempered pottery from south Wales in the late Iron Age and early Roman period, *Bulletin of the Board of Celtic Studies* 30, 405–419.
- Stanford, S.C. 1981. *Midsummer Hill, an Iron Age Hillfort on the Malverns*. Leominster: S.C. Stanford.
- Taylor, J. 1997. Space and place: some thoughts on Iron Age and Romano-British landscapes, in Gwilt and Haselgrove 1997, 192–203.
- Thomas, A. and Holbrook, N. 1998. Excavations at the Memorial Hall, Lechlade, 1995, in Boyle *et al.* 1998, 282–288.
- Thomas, A., Holbrook, N. and Bateman, C. 2003. *Later Prehistoric and Romano-British Burial and Settlement at Hucclecote, Gloucestershire. Excavations in Advance of the Gloucester Business Park Link Road 1998*. Cirencester: Bristol and Gloucestershire Archaeological Reports 2.
- Thomas, N. 2005. *Conderton Camp, Worcestershire: A Small Middle Iron Age Hillfort on Bredon Hill*. York: Council for British Archaeology Research Report 143.
- Timby, J. 1999. Later Prehistoric and Roman pottery, in Mudd *et al.* 1999, 320–338.
- Wainwright, G. 1967. The excavation of an Iron Age hillfort on Bathampton Down, Somerset, *Transactions of the Bristol and Gloucester Archaeological*

Society 86, 42–59.

- Wainwright, G. 1970. An Iron Age promontory fort at Budbury, Bradford on Avon, Wilts, *Wiltshire Archaeology Magazine* 65, 108–166.
- Walker, G., Langton, B. and Oakey, N. 2001. *An Iron Age Site at Groundwell West, Wiltshire 1996*. Cirencester: Cotswold Archaeological Trust.
- Wigley, A. 2002. *Building Monuments, Constructing Communities: Landscapes of the First Millennium BC in the Central Welsh Marches*. Unpublished Ph.D. thesis, University of Sheffield.
- Whittle, A. 1989. Two later Bronze Age trackways and an Iron Age channel on the Gwent foreshore, *Bulletin of the Board of Celtic Studies* 36, 200–223.
- Willis, S. 1997. Settlement, materiality and landscape in the Iron Age of the East Midlands: evidence, interpretation and wider resonance, in Gwilt and Haselgrove 1997, 205–215.
- Willis, S. 2006. The later Bronze Age and Iron Age, in N. Cooper (ed.), *The Archaeology of the East Midlands. An Archaeological Resource Assessment and Research Agenda*, 89–136. Leicester: Leicester Archaeology Monograph 13.
- Yates, D. 1999. Bronze Age field systems in the Thames valley, *Oxford Journal of Archaeology* 18, 157–170.
- Yates, D. 2001. Bronze Age agricultural intensification in the Thames valley and estuary, in J. Brück (ed.), *Bronze Age Landscapes: Tradition and Transformation*, 65–82. Oxford: Oxbow Books.

The aesthetics of landscape on the Berkshire Downs

Chris Gosden and Gary Lock

Introduction

An earlier form of social archaeology attempted to work from existing typologies of society and to identify these in the archaeological record. The archaeological aesthetic of the day was one of neat categories and a sense of ordered understanding. Everything in its place and a place for everything was a modern need to impose order through typology and classification; this resulted in much of processual archaeology attempting to define the material consequences of bands, tribes, chiefdoms and states and to spot these characteristics in the archaeological record.

A typological approach to social archaeology has declined over the last few decades, as people have become less certain about both the social categories with which they have been working, and of the ability of the archaeological evidence to reflect these in any straightforward way. However, we suggest that a typological aesthetic still exists in approaches to later prehistoric landscapes in the attempt to define, map and date discrete sets of landscape features that match our accepted classifications. Much effort goes into discovering which areas had field systems at particular times and which did not; when roads and trackways occur; when the first linear ditch systems appear; and how any of these relate to settlements or hillforts? Implicit in such approaches is the idea that landscape systems were laid out as more or less unitary designs, with a single date and history, and that landscapes changed through time in an ordered way that can be identified and recorded. In some instances this may be the case, but in many others it is not and we

need to distinguish one from the other empirically, not through assumption.

We argue here that many landscapes were built up piecemeal, through the creation of ditches, banks, lynchets, and other elements in different ways at different times. Asking questions about a linear ditch, for example, may not elicit a single answer in terms of date and function, since it may have been originally dug in the Late Bronze Age, finally silted up in the Romano-British period, and meant a range of different things throughout its history. We need to replace a typological approach to landscape with a generative one, whereby the same elements were put together in varying ways at different places and times and not always, or even often, laid out as single entities.

A generative approach to the landscape helps explain a crucial aspect of late prehistoric British landscapes, that is their variability. Indeed, a vital realisation of our work, based on seven years of fieldwork on the Berkshire Downs, is the variation – within this small region – in the manner in which landscape elements such as ditches, fields, and open and enclosed sites are put together. This requires a new form of archaeological aesthetic in that we are not attempting to create a neat, ordered typology of landscape types that develop systematically over time, but to understand the manner in which varying landscape forms were generated over time and their degrees of variability.

This variability calls into question the accepted concepts of ‘continuity’ and ‘change’, and we suggest that landscape as a cultural resource offered the choice of not only introducing new elements into the mix but also the re-activation of old elements through ascribing new social value. In effect, the landscape becomes a palette of elements that can be chosen, charged with meaning, and used to create and maintain social relations. These elements can be new or re-used, used once or many times, to create meaningful situations through their relationships with each other, situations that conform to a social aesthetic of landscape.

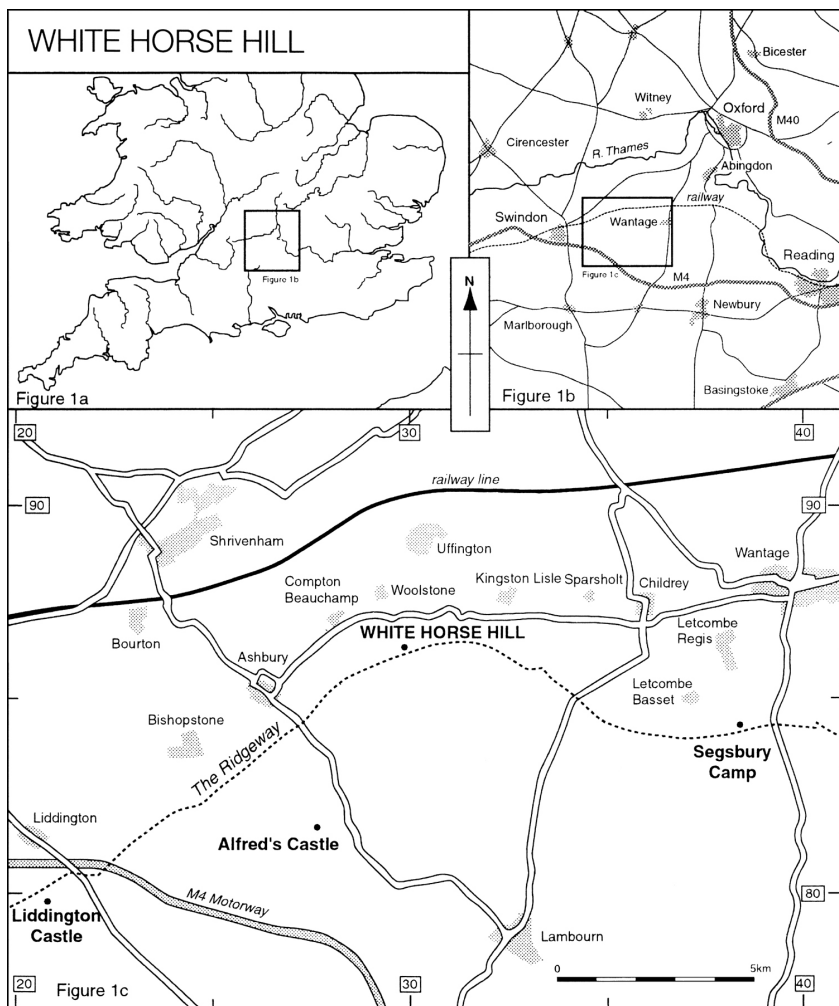


Fig. 1. The Berkshire Downs area, southern Oxfordshire, showing the three main sites discussed in the text: Uffington Castle, Segsbury Camp and Alfred's Castle.

In what follows we shall compare and contrast three sites in their landscapes: Uffington Castle, Segsbury Camp, and Alfred's Castle (Fig. 1), three sites that at a superficial level are similar: they are all 'hillforts', but, as we shall show, the story is in the detail, and it is a story of remarkable diversity. Before that, however, we must discuss some of the general ideas that underlie our attempts to understand the generation of landscapes.

A relational view

Many individuals working in the social sciences are currently developing relational views in which particular entities, such as people or objects, do not have their own essential characteristics, but are given characteristics through the relationships they enter into. Marilyn Strathern (1988) has developed this idea, in which persons do not have invariant qualities that they carry around with them but rather take on qualities from the network of relations with others in which they are enmeshed. Male and female characteristics belong less to persons than to the social matrix as a whole, and can be attached to people in different manners under varying circumstances. In a more recent work, Strathern (1999) shows a greater interest in things and the manner in which the material world can be given certain sets of appearances through human action, with things being the objectification of human capacities, and persons being created in particular forms by links with their material products.

In this respect, Strathern's work has been partly influenced by Gell (1998) who, in his analysis of art objects, concentrated on how social relations are created and shaped through things. Gell shifted the analysis of art from an understanding of meaning to an appreciation of effect, concentrating on how objects have effects on human relations. Real appreciation of effects can only come about through an analysis of the formal properties of objects, so that in many ways his ideas could be applied to any form of material culture and not just to ideas that might be designated as art.

Building on these ideas, a relational view applied to landscapes would start with the definition of entities such as pits, post holes, ditches, lynchets, ramparts etc., and an understanding that the history of each entity matters, in terms of, for instance, when a ditch was created initially; how often it was cleaned out and re-cut; and when it was finally allowed to silt up. Fundamental to this are the relationships that build up between each of these elements as they are used at different times and in different ways, and it is the combination of these elements that was often crucial to their social impacts.

We must not forget that lying behind each ditch, bank or pit are patterns of human action and sets of sensory appreciations of the

landscape that might best be termed aesthetic. Aesthetic approaches remind us that people's sensory responses to objects are vital in attaching values to social-material relations; thus, aesthetic appreciation arises from all aspects of sensory experience, and is not just or mainly concerned with beauty and refinement (Gosden 2001). Human social life is crucially about attaching values to various aspects of experience, and this means in turn attaching values to people and to things. None of our experiences are neutral or value-free, even if some have more impact on us than others. Patterns of action on the landscape are vital in creating sets of experiences of very particular types, so that choosing to create a set of post holes, ditches or ramparts reflects an attachment of value played out through particular social relationships.

A 'place' is a part of the landscape picked out for its special qualities. These qualities are sensory or even sensual: the fading of the light, the feel of the wind, how far you can see on different days, the echo of sound as it carries up a valley, a set of smells. Part of the power of landscape is in memory, where the things that happened at a spot take on a quality that is partly to do with the place itself. To revisit a place after many years is to remember the things that happened there, that might otherwise have remained forgotten. To create a place may be a short or a long process, which will derive from the shape of the landscape itself and its combination with humanly-created features, which are themselves combined in special ways.

We argue that the creation of places with special sets of physical attributes and connections to people was a major part of people's lives through later prehistory, in a way that was different from anything that came before. Whereas it could be argued that a sense of place was centred on monuments during the Neolithic and in the earlier part of the Bronze Age, we see some merit in insisting that a greater attachment to land arose during later prehistory, and we would like to know the mechanisms by which this happened and the sorts of values attached to that land.

Our basic argument is that place becomes more broadly defined and incorporates a concept of the wider landscape; that the value of land increases through social manipulation later in the Bronze Age; and that this importance remains through the Iron Age. This

importance is not a straightforwardly economic one, but is concerned rather with a set of human social connections made through and around landscape elements, and also through deliberately developing the characteristics of places themselves. Places are made through the social activation of landscape elements and the relationships between those elements; places are not valued just as they are found. It is the process of ‘making place’ in three different cases to which we now turn.

The hilltop at Uffington

Uffington has a long history of use, which includes a Neolithic earthen long mound, Bronze Age round barrows (both re-used, in the Romano-British and Anglo-Saxon periods respectively), plus the chalk figure of the White Horse, the Ridgeway, a linear ditch, and a hillfort (Gosden and Lock 1998). All of these have been investigated recently (Fig. 2; Miles *et al.* 2004).

The White Horse

A date for the initial construction of the White Horse was obtained using Optically Stimulated Luminescence (OSL) on sediments accumulated directly above and below the earliest puddled chalk surface identified in section beneath the lower edge of the figure. This suggested that the initial construction took place between 1700 and 300 BC with only a 2.5% chance of it having been constructed later than 300 BC. The error margins involved with this technique are broad, but this date is sufficiently accurate to confirm that the figure was earlier than Anglo-Saxon in origin, thereby disproving one long-held theory. It also suggests that its initial construction was earlier than the Late Iron Age date proposed by many on the basis of stylistic comparisons to Iron Age coins and metalwork (Piggott 1931).

Geophysical survey and excavations showed that little fundamental change had occurred to the shape of the figure. Piggott and others, from Aubrey onwards, had sought parallels focused on the beak rather than the whole figure, and excavation proved that the beak was an ancient element of the figure. However, the flowing shape has also been proved through excavation to be ancient and not the result of simplification over repeated scorings, despite the

likelihood that the horse needs to be scoured about every twenty years to maintain its outline. The OSL dates receive some tentative support, therefore, on stylistic grounds that the origins of the Horse might lie in the Late Bronze Age or Early Iron Age.

This places the horse in the same period as the construction and first phase of use of the hillfort, although it is impossible to say which may have been constructed first, or if they were exactly contemporaneous. What is certain is that both were facets of a wider change in activity on the Downs between the Late Bronze Age and Early Iron Age.

The linear ditch

Uffington is one of a number of hillforts in the area that displays a direct physical relationship with a linear ditch, usually part of a wider system running across the Downs. This ditch was dug into the chalk bedrock to a depth of over a metre with a bank alongside made from the rock and earth removed from the ditch. The traditional view of such features is that they date from the Late Bronze Age, based on interpretations of other similar ditches in the vicinity (Ford 1982), but our excavations provided no direct evidence of this. Although the relationship of this ditch to the hillfort was not confirmed by excavation, the fact that it runs up to the hillfort ditch and did not continue into the interior of the enclosure suggests that it is contemporary with, or later than, the hillfort.

OSL dating of the primary fill of the ditch confirmed that it was no older than Early–Middle Iron Age, while the maximum age obtained for the upper fill was Late Iron Age. The actual dates are probably later than this, and – on the evidence of the small sherds of pottery recovered from the primary fill – might be as late as the Romano-British period. The dating of ditch fills does not, of course, date the origins of the ditch, and it is possible that the ditch was regularly cleaned out after construction. If the ditch was originally dug in the Late Bronze Age and only finally infilled in the Romano-British period, this would mean that it was actively cleaned for over a thousand years, which does seem extraordinary. The other possibility is that the ditch was constructed later in the Iron Age or the Romano-British period, and post-dates the hillfort. This might

indicate that the ditches on the Berkshire Downs were not all of the same date, as others have been dated to the Late Bronze Age (Ford 1982), and that the landscape was divided up a number of different times for varying reasons.

The Ridgeway

It is difficult to be precise about the Ridgeway, both in terms of its origins and its location at different times in the past; consequently most authors remain fairly vague when writing about it. Richards (1978, 41) suggests that its development as a recognised route could have taken place after initial clearance early in the Neolithic, and that its importance was partly due to the lack of useful waterways on the Berkshire Downs. Difficulties with the Ridgeway's precise route are illustrated by Gingell (1992, 38), who describes a choice of routes further south between Barbury and Liddington hillforts. He also comments on the association of monuments, especially round barrows, with the Ridgeway, a long-standing argument used to date the route to at least Neolithic times.

Computer simulation work carried out as part of a wider landscape investigation (Bell and Lock 2000) suggests that the approximate route of the Ridgeway could originate earlier than the Neolithic as an animal trackway. North–south movement across this area of downland is relatively easy compared to travelling east–west because of the ‘grain’ of the land created by the dry valleys. The use of least-effort algorithms to simulate east–west movement produces a route very similar to the modern Ridgeway following the edge of the Downs, thus avoiding the barriers caused by the dry valleys. While such a deterministic procedure would not necessarily apply to human movement, because of cultural and other influences, it seems reasonable to accept it for animals, especially movements of herds. The suggestion, then, is that the Ridgeway started as an animal track perhaps earlier than the Neolithic, and was later utilised by humans. By the Late Bronze Age, it was therefore probably well established and exerted an influence on the location of hillforts and the White Horse as discussed below.

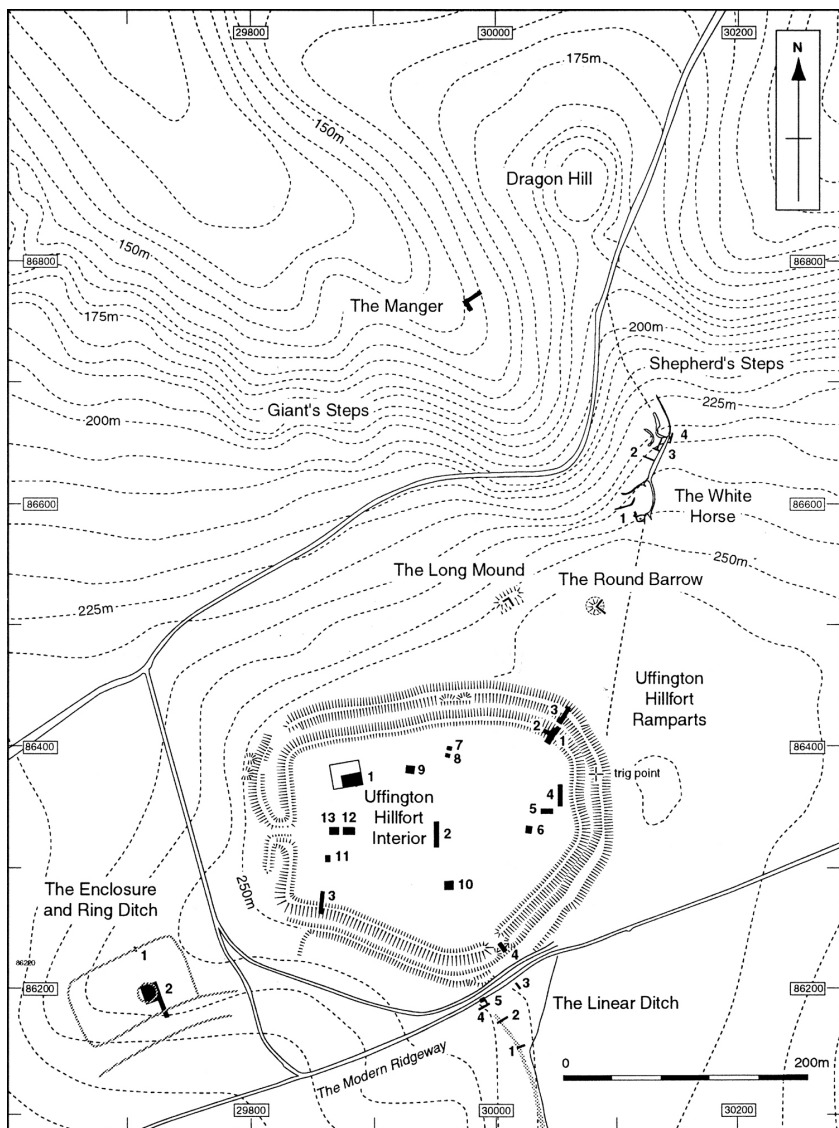


Fig. 2. The elements of White Horse Hill showing the trenches excavated between 1989 and 1995 (after Miles et al. 2004).

The hillfort

The questions asked at Uffington hillfort are concerned with how it links to other features of the hilltop, which provide a real long-term history from the Neolithic onwards. How was the siting of the

enclosure influenced by questions of visibility and movement within the landscape? What was the nature of the activity within the enclosure and how can this be linked to the history of construction and structural maintenance of the enclosure? By asking these questions it should be possible to avoid judging whether the hillfort was a functional or a sacred site – a question deriving from a modern view of the world – and look as openly as possible at the changing role that the hillfort played within the long-term histories of this part of the Berkshire Downs.

Construction, use and transformation

Uffington Castle was first constructed during the eighth to seventh centuries BC. A single timber-framed box rampart was constructed with an outer ditch, two opposing entrances to the east and west, with limited internal use of the hillfort. There may then have been a period of disuse and decay of the rampart, which was subsequently remodelled as a dump rampart. It is uncertain when this remodelling occurred, but it might have been within the Early Iron Age, no later than 400 BC. At this time the eastern entrance was blocked, leaving only the western entrance open, which would have had profound implications for movement into or through the site. The other possibility – for which there is no direct evidence, but should be raised due to the date of dump ramparts elsewhere – is that the Uffington dump rampart was constructed later, in the Middle Iron Age (Avery 1993). There is no particular reason why the sequence found elsewhere should apply to the Berkshire Downs; however, a later date for the rampart would make sense of the limited use of the interior of the enclosure during the Middle Iron Age.

Whatever the date for the construction of the dump rampart, there are interesting questions about the material used to block the gateway at the eastern end of the enclosure. Layers within the dump rampart contained a large number of sherds of All Cannings Cross finewares, which had been heavily burnt. This pottery might just be residual, although it could suggest deliberate use to block the entrance of material which had been curated and burnt, and maintained a connection to the people who originally constructed the box rampart and the eastern gate. The eighth and seventh

centuries BC, when All Cannings Cross style pottery was in use, was a period of important change on the Berkshire Downs and elsewhere. Material associated with those who carried out those changes may have retained some importance and become part of the dense skein of ancestral connections woven across White Horse Hill.

Little use was made of the interior of the hillfort in the Middle Iron Age, and none at all in the Late Iron Age and early Romano-British periods. The next real evidence of use is in the late Romano-British period between the late fourth and early fifth centuries AD. Here again the nature of activity on the site is enigmatic: there is no evidence of occupation, but rather indications of sporadic use leading to the deposition of a range of artefacts, the infilling of the Early Iron Age pits, and the creation of some features, most notably a bread oven. Substantial re-modelling of the spatial characteristics of the hilltop also took place at this time, with the construction of an enclosure outside the western entrance and the establishment of breaks through the rampart at the north-eastern and south-eastern corners of the hillfort. Thereafter, there is very little evidence for use of the hillfort itself, although we know from other evidence that people were active on the hilltop from the Anglo-Saxon period to the present.

In construction, the hillfort was very similar to others built at the same time along the crest of the escarpment, with a single timber-framed box rampart and outer ditch enclosing the hilltop, but it may have differed in its role from other sites. Whether the hillfort is earlier or later than the White Horse is unclear, given the uncertainty over the precise date of the latter, but we can say that one would have enhanced the visibility of the other, irrespective of which was constructed first (although we would tend to see the horse as being earlier than the enclosure). The building of the ramparts may well have been more to do with display, power and status than with defence (Collis 1996, 88–9). If the rampart was faced with split timber, or even lime-washed, this would have increased its visibility; and if this was the case, the visibility of the enclosure may have enhanced the visibility of the horse. However, visibility is not the only factor at work here, as there were many ways to enhance the visibility of the hilltop other than by building

ramparts. The need to enclose, and to signal a difference between those inside and those outside, was also a motivation, suggesting that the nature of the community needed defining and perhaps defending at this time.

As we indicated, Uffington Castle in its earliest phase had two entrances, east and west, on an alignment similar to the present day Ridgeway. There is in fact evidence (see below) that the Ridgeway immediately south of the enclosure did not reach its present position until the Romano-British period, when the linear ditch running up to the enclosure was deliberately infilled. This raises two possibilities: either the Ridgeway first appeared in the Romano-British period, or it had a different route across the hilltop prior to that time. The latter seems more likely, again based on the computer simulation (Bell and Lock 2000), and because the edge of the chalk offered better visibility than travel through the Vale. It is also suggested (*ibid.*) that some of the Ridgeway hillforts were built on the route of the existing trackway, because the simulated route deviates from the modern route to pass through the two entrances and the enclosure itself at Liddington, and also at Hardwell Camp and Rams Hill. Liddington certainly has a blocked entrance, one has also been suggested for Rams Hill (Bradley and Ellison 1975) although this is uncertain, and nothing is known of Hardwell. This could also be the case at Barbury Castle further to the west on the Marlborough Downs (Gingell 1992, fig. 95).

At Uffington itself, the position of the Ridgeway can be seen to change in relation to the wider use of the hilltop (Fig. 3). Initially it pre-dates the hillfort, which is built so that the trackway runs through it (a possible surface running east–west through the middle was identified in interior trench 2, but this was very uncertain and its extent was not traced). The focus is on movement along the Ridgeway into and out of the enclosure and, perhaps, on its proximity to the White Horse. When the eastern entrance was blocked, this spatial relationship was destroyed, and the Ridgeway probably moved to the north of the enclosure, to run between it and the horse, as to the south was the linear ditch which lay open.

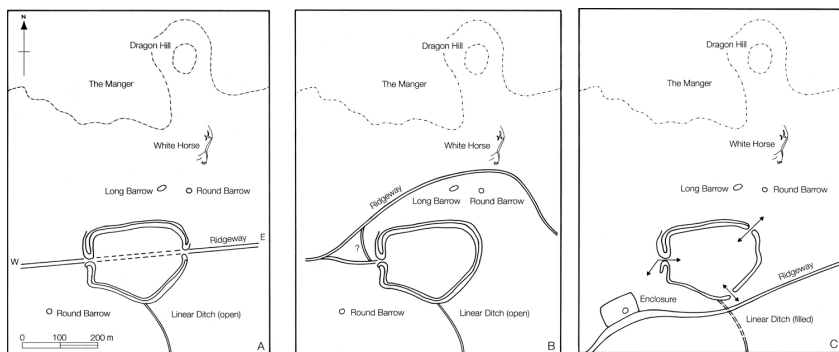


Fig. 3. *The changing relationship between Uffington Castle hillfort, the Ridgeway, and other elements on White Horse Hill: A. the hillfort positioned on the existing Ridgeway, eighth/seventh century BC; B. the blocking of the eastern entrance, c. fourth century BC; C. Romano-British increased access to the hilltop, c. fourth century AD.*

The focus now was on the enclosure as an enclosed space with limited movement through a single entrance, connected to the horse via the linking Ridgeway running outside the northern ramparts (along the current pathway). During the Romano-British period the linear ditch to the south was filled in and the Ridgeway established on its current route, perhaps to incorporate the newly constructed rectangular enclosure outside the hillfort. The remodelling of the hilltop shifted the focus onto the easy access to the White Horse and enclosure interior from the Ridgeway, and hence to long-distance, as well as local, connections. The wider attraction of the hilltop during the Romano-British period could have been due to the presence of the horse, already an ancient monument by this time, possibly a thousand years old, the existence and origins of which were probably shrouded in mythology.

The use and repair of the enclosure

Use of the enclosure appears to have been light and out of keeping with the effort required to build and maintain it. No house structures were identified by geophysical survey or excavation, although this may be a result of the small size of the trenches and the low percentage of the interior that was dug (2.3%). Identified structures include a small number of possible 4- or 6-post buildings, while pit digging is minimal but does appear in at least two phases,

perhaps of the same date as the construction and remodelling of the ramparts.

Most of the activities usually associated with hillforts, including crop processing and storage, and textile production, are represented at Uffington, although at much lower levels than might be expected for a site of this size. On the present evidence, it does not seem likely that large numbers of people lived inside the enclosure, nor does it appear to have been a centre of the agricultural economy or of craft production. It is possible that there was some limited occupation of the enclosure, but the best explanation of the earliest evidence is that there was sporadic use connected with a range of activities carried out on the hilltop and involving people moving along the Ridgeway. What these activities were is not certain, although cleaning the White Horse might have been one. The construction of the rampart and the digging of the ditch would have been far more time-consuming than any of the activities evidenced in the interior. Such a large project could only have been undertaken by a much larger number of people than there is evidence for inside the enclosure. This may indicate that the construction of the enclosure was a major reason for its existence, and was undertaken either by one community who lived elsewhere, or by people drawn regularly from other communities.

Sharples (1991) considered that Maiden Castle had seen a continuous sequence of construction over a period of three centuries, with perhaps annual work on the ramparts, rather than maintenance when it was needed. If this view is correct, the ramparts of Maiden Castle became an end in themselves rather than an element of the enclosure mainly connected with defence. Although there is no direct evidence for continuous work on the ramparts at Uffington, there is a substantial counterscarp bank around the ditch circuit which could represent frequent cleaning out of the ditch: the construction of the ramparts and digging of the ditch might have served a dual role in the life of the community, both to create an obvious and visible site, and as a focus of communal action which bound people together in a manner that would not have happened otherwise. The external features and look of the enclosure would have been far more important than any internal use.

White Horse Hill is a place from which to see, and which can be seen. The route of the Ridgeway would have brought people along the edge of the chalk, in addition to those who lived in the area, and would have increased White Horse Hill's position as a focal point. Furthermore, White Horse Hill was one of the few areas that was kept fully cleared throughout the Bronze Age and this would have helped mark it out as somewhere different for travellers looking up at the Downs from the Vale. The White Horse would have been an extra marker of this difference, further enhancing a spot that had been long picked out as special partly due to the unique topography of the Manger and Dragon Hill. Features of art in the landscape can only make sense in terms of movement and visibility within that landscape (Bradley 1997, 154), but as this is only a single instance of an art object with which to make this point, it is impossible to define a pattern. However, similar forces affected the siting of the hillfort at Uffington and others along the Ridgeway and illustrate arguments about visibility and movement.

Segsbury Camp

Segsbury Camp is 12 km east of Uffington, lying just north of the Ridgeway on the very edge of the chalk escarpment. It is a large hillfort covering some 11 hectares, differentiated from Uffington by the apparent intensity of occupation in its interior (Fig. 4). Uffington produced no evidence of house structures and a much less densely scattered set of pits, which, as suggested above, may reflect occasional use rather than permanent occupation. At Segsbury, magnetometry showed probably more than ten circular structures, whilst excavation suggests an unknown number more that are too ephemeral to be seen on the geophysics (Lock and Gosden 1997; 1998).

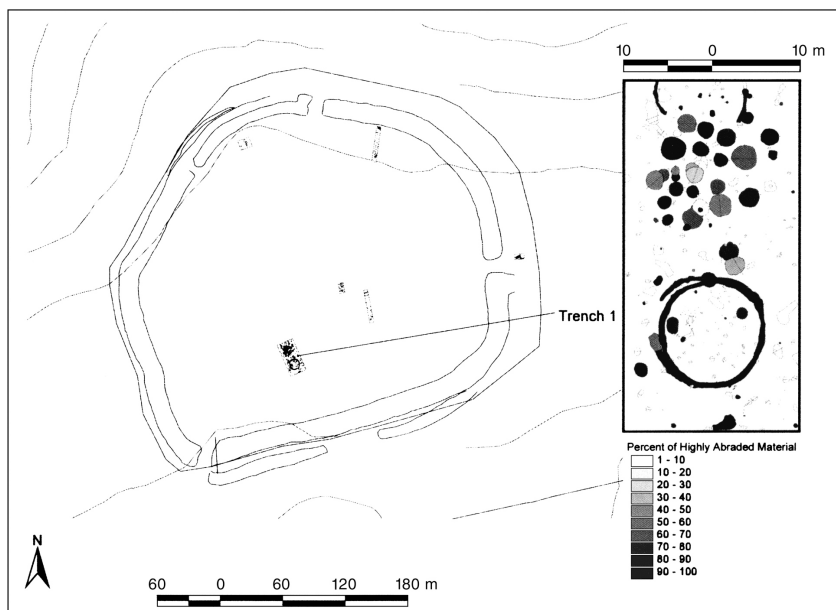


Fig. 4. The hillfort of Segsbury Camp, showing excavation trenches and details of trench 1.

From our preliminary observations, it appears that Segsbury represents a settlement with a full range of domestic activities relating to agriculture and to crafts such as metalworking, in addition to the disposal of human remains.¹ Furthermore, this activity may relate to a relatively brief period of the Early and Middle Iron Age and it is uncertain at this stage where people's activities concentrated before and after this period, and how this occupation relates to the use of the landscape as a whole. This again contrasts with nearby sites such as Uffington, Alfred's Castle and Rams Hill, all of which show longer periods of use, starting before the Iron Age and extending into the Romano-British period.

Unlike Uffington, Segsbury is located within a busy landscape of field systems and linear ditches stretching for a considerable distance southward across the Downs (Fig. 5). Although these are suggested as mainly representing a Romano-British intensification of agriculture in the area (Ford *et. al.* 1988), it is likely that prehistoric precursors are incorporated into the complex detail of the aerial photographic evidence, which includes a series of banjo enclosures. It is tempting to see the combination of domestic debris

and structures within Segsbury and the field systems outside the hillfort as representing a more practical use of the landscape, in contrast to the non-domestic activity at Uffington, which is surrounded by burial monuments and the White Horse, but few field systems.

Another contrast between Uffington and Segsbury lies in the construction and development of the ramparts and the changing delineation of the enclosed space. There is no All Cannings Cross type pottery at Segsbury, and nothing to suggest that the first phase ramparts are as early as at Uffington. There is, however, a pre-rampart enclosure represented by a ditch just inside the ramparts around the northern and eastern circuit visible on the geophysics and excavated in 1996, and a timber palisade beneath the later rampart around the southern side, excavated in 1997. These appear to be part of the same pre-rampart definition of the enclosed area, which was reinforced probably in the sixth to fifth century BC by the start of the rampart sequence. That sequence is a complex one – and one that differs from both Uffington and Alfred's Castle. At the south of the site, where our excavations through the rampart took place, the initial palisade was removed and replaced by a larger one with a revetting chalk bank which was then incorporated into a massive box rampart over 5 m in width, ultimately to be covered by an even more massive dump rampart with a rear revetment of sarsen stone.

This sequence is much simplified and the detail of the stratigraphy suggests that many smaller events took place in between, or as a part of, the major constructional phases. One of the more curious is the occurrence of two or three courses of chalk dry-stone walling within the fill of the box rampart forming a right-angled corner. This is too ephemeral to have been structural and the chalk from which it is constructed is of a particular 'green' variety, which only occurs lower down the geological column and was found nowhere else on the site. It seems that people were collecting this chalk from some distance away and incorporating it into the rampart structure. The intention was not for it to be visible: this implies that it was the very act of incorporation that was important, creating links between Segsbury and local places in the landscape in a very physical and material way.

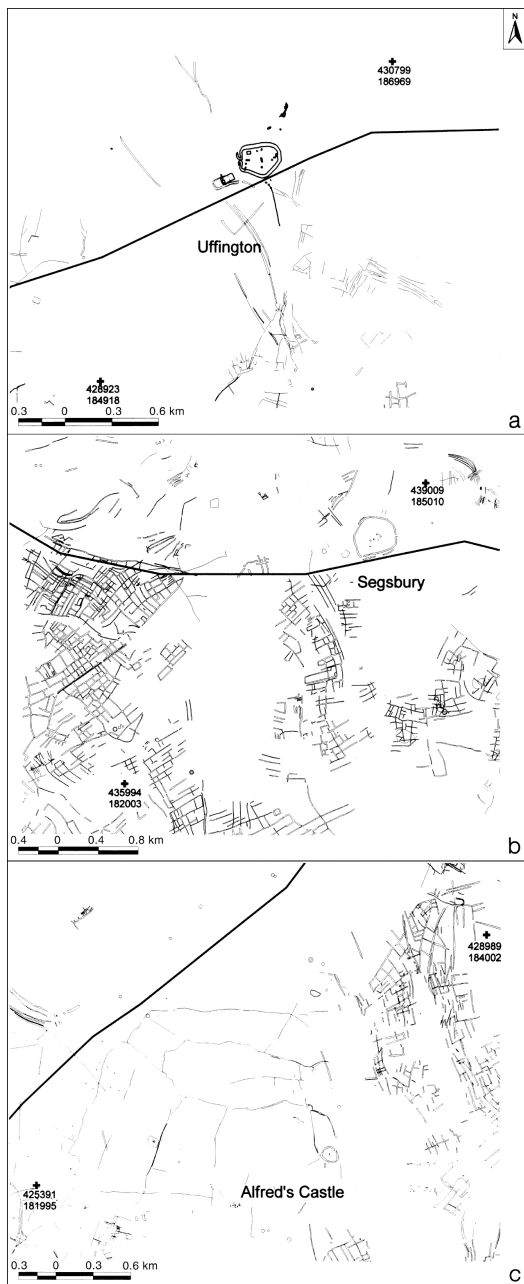


Fig. 5. The landscapes around a. Uffington Castle, b. Segsbury Camp and c. Alfred's Castle (© English Heritage, NMR).

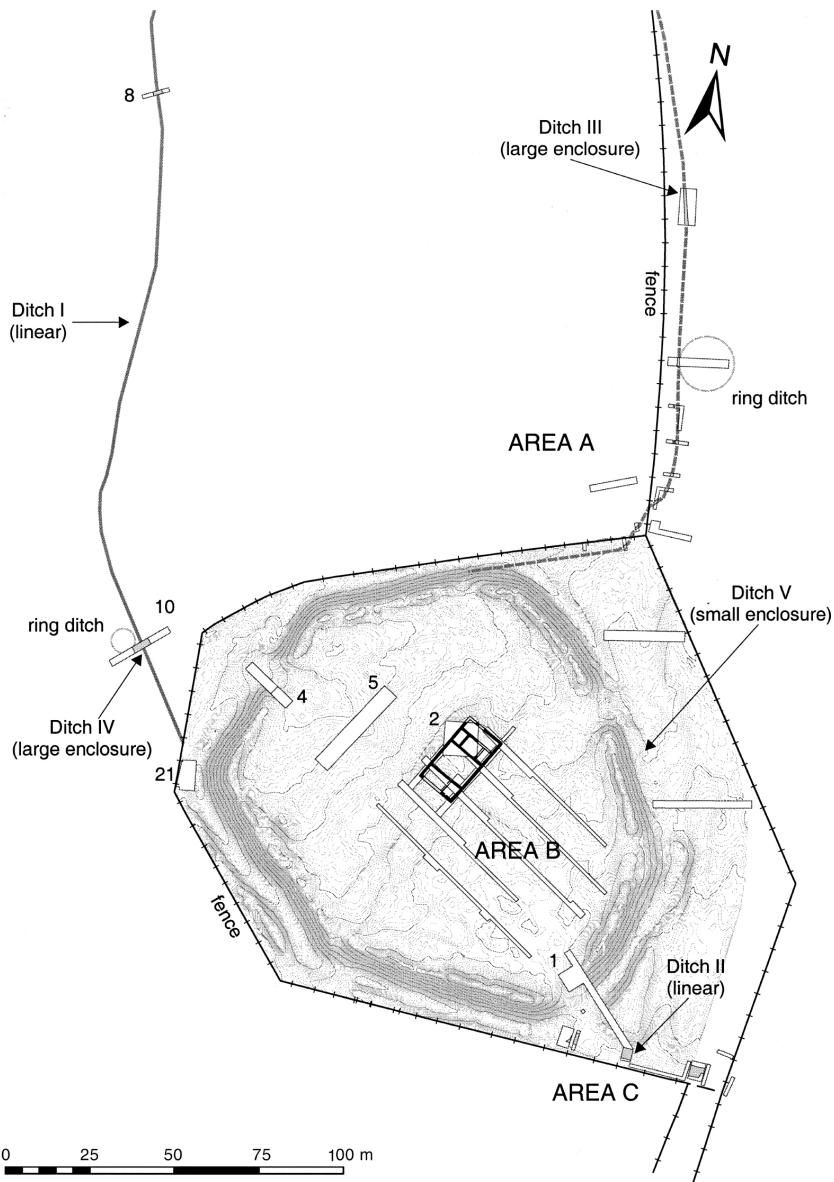


Fig. 6. The excavation trenches at Alfred's Castle.

Alfred's Castle

Alfred's Castle is a small earthwork enclosure of approximately hexagonal shape with an interior area of 1.2 hectares. It was excavated over three seasons between 1998 and 2000. It differs

from both Uffington and Segsbury in not being situated on the chalk scarp of the Ridgeway, but slightly to the south of it within a large natural depression in the Downs. Surrounding the enclosure is a series of linear ditches mapped from aerial photographs, which form an integrated system that utilises the contours of the local topography, quite different from the field systems which start just to the east of the site and stretch across the Downs to Segsbury Camp (Fig. 5 above). Integrated into the linear system is a larger enclosure that joins the northern side of the smaller hillfort enclosure.

Central to an understanding of Alfred's Castle is sequence and the way that manipulating links to the past as a form of social value apparently influenced the development of the site. This was elucidated through the excavation of 21 trenches located both within and around the small enclosure (Fig. 6). The earliest extant features on the site are a pair of Late Bronze Age ditches, one to the west of the large and small enclosures (ditch I), and one to the southern and eastern side of the small enclosure (ditch II). Ditch I has been visible on aerial photographs for many years and trenches 8 and 10 were positioned to explore it; both revealed two ditches. Ditch I was a large flat-bottomed linear ditch approximately 2 m deep with fills containing pottery of probable Late Bronze Age date. Ditch I represents a Late Bronze Age linear like those known elsewhere on the Berkshire Downs (Ford 1982). Trench 21 revealed that ditch I was cut by the enclosure ditch of Alfred's Castle (ditch V), and also demonstrated that its end had been packed with chalk where it was cut through, to give the appearance of unbroken chalk along the side of the enclosure ditch.

Ditch II ran across the southern side of the site and was investigated by means of the trenches in area C. It was relatively shallow, but of the same flat-bottomed profile as ditch I. A terminus to the ditch was discovered at its eastern end where its width was reduced by half, from 2 m to 1 m, and then ended. At its western end, ditch II was cut through by the enclosure ditch (ditch V), which made use of the line of the earlier ditch but was much more massive than it. The linear was again packed with clean chalk where the enclosure ditch cut it, presumably to give an appearance of an unbroken line of chalk along the side of the enclosure ditch, like ditch I. Although we have no definite evidence, ditches I and II

appear to have been converging on the south-west corner of the small enclosure of Alfred's Castle. The line of these ditches was utilised in constructing the enclosure, although the enclosure ditches, ditch V, enlarged the existing linears. Alfred's Castle may have been constructed at a point in the landscape already picked out as significant by the meeting of two linears.

Cut partially into the fill of ditch I and slightly to one side of it, was a smaller V-shaped ditch (ditch IV), approximately 1 m deep and re-cut at least once, following the line of the linear ditch towards the small enclosure. Ditch IV was dug after ditch I had fully silted up and could only have formed an ephemeral mark on the landscape. Trench 10 contained an indication of a possible ring ditch of an earlier barrow, cut by ditch IV. The Late Bronze Age linear (ditch I) may have been aligned on an earlier barrow at this point.

On the eastern side of the site (area A), a series of trenches was dug to reveal two and sometimes three ditches – called collectively ditch III. At some points these were separate, and sometimes they cut each other, suggesting a number of phases of cutting, silting and re-cutting. The ditches were aligned on an earlier round barrow, first recorded in the 1960s by Grinsell and partially excavated by us, before turning sharply west along the modern fence line to join with the enclosure ditch of Alfred's Castle at its northernmost corner. At several points along the ditches Early Iron Age pottery was recovered, suggesting that ditch(es) III was broadly contemporary with the digging of the Alfred's Castle enclosure ditch, which post-dates the linear ditches (I and II).

We thus have the following sequence, the earliest phases of which are somewhat speculative, the later phases more certain. The earliest features on the site were round barrows, of which two possible examples were discovered through excavation, and a third is suspected from aerial photographic evidence. One of these barrows may have been used to align the linear (ditch I) which came in from the north, and the other for the later V-shaped ditches which form the eastern boundary of the large enclosure (ditch III). The Alfred's Castle enclosure was created at the point where two linears intersect and was broadly contemporary with the V-shaped ditches forming the large enclosure. The enclosure of Alfred's Castle

itself was created by digging a V-shaped ditch, similar in profile to those mentioned above, but much deeper and steeper. Contemporary with this ditch was dense occupation of the interior, evidenced by one possible house structure and a mass of pits and other features. The pits contained rich assemblages of bronze and iron objects, pottery, spindle-whorls, loomweights, and animal bones dating from the Early and Middle Iron Age.

The structure of the rampart and the nature of the entrances into Alfred's Castle were explored in trenches 1 and 4. Again, the ramparts are very different from those of Uffington and Segsbury. Trench 4 demonstrated that the break in the rampart on the western side of the enclosure was an original entrance, and that the rampart here was of two phases, with an original sarsen-faced rampart being supplemented by a substantial chalk bank with revetting posts. There is a break in the ditch in front of the gap in the rampart, allowing movement in and out of the small enclosure and connecting with the large enclosure. The north-western end of trench 1 showed that here the rampart was substantially different in character and may have been only of a single phase. It also demonstrated that the break in the rampart was not original, but had been created in the Romano-British period; Romano-British pottery, hobnails and other artefacts were recovered from the upper ditch fills, together with substantial amounts of sarsen stones, probably pushed down from the rampart to form a consolidated surface. Pits and post holes within the enclosure in trench 1 were also filled with Romano-British material. This activity is related to the building and use of a Romano-British villa house which was constructed inside the small enclosure in the late first century AD (Gosden and Lock 2003), thus continuing links to the past and extending the site sequence into the third century AD, when the building was abandoned. Despite the name Alfred's Castle, there is no evidence of post-Roman activity at the site.

Conclusions

It is evident from this brief review of the evidence that all three sites are remarkably different, although they, and the landscape around them, were constructed out of the same basic elements. It is the combination of these elements in different ways and at different

times that supports a stress on relations, as both aspects of the material world *and* the people who lived within it were defined by their mutual and particular relationships.

Over the eight or nine centuries considered here, changing social strategies determined the shifting combination of pits, ditches, post holes, and ramparts, using the full suite of available elements. These choices were sometimes pragmatic and functional (Segsbury and its landscape), sometimes driven by more ritualised aesthetics (White Horse Hill and its landscape), but were invariably the material consequences of social practices – whether or not those practices are identifiable in any other way in the archaeological record.

Also important here is the multi-scalar nature of the relationships being constructed and played out, both spatial and temporal. Similar features are used to define specific areas ('sites'), to configure space and create place within those sites, and to connect those sites across larger distances in the creation of meaningful landscapes. Individual elements can have life-histories of varying lengths, which can include periods of apparent dormancy before being re-activated. This challenges traditional concepts of 'continuity' and 'change' through the possibility of dormant elements being re-charged and given new meaning through a changed set of relationships.

Closely related to these traditional concepts are those of classification and typology as mechanisms for understanding past social relationships and change. These are ultimately reductionist methods that avoid the complexity of the data, whereas the relational approach depends on that complexity being acknowledged and explored. Forcing the data of eight or nine centuries into a series of defined phases sidesteps the central issue of much of the archaeology that concerns agency and society (Barrett 2001): how do small-scale, often individual decisions and actions relate to larger-scale social formations and change?

Confronting complexity also acknowledges that the resulting interpretations will not be neat solutions that satisfy the former aesthetic. For example, the ramparts at all three sites are very different, and the two parts of the ramparts at Alfred's Castle that we excavated were different from one another. This suggests that the acts of creating and recreating such features was more

important than their finished form at any point in time. This has considerable implications for rampart typologies. The inclusion of possibly curated pottery in the blocking of Uffington's eastern entrance and the green chalk feature within the Segsbury rampart, hint at Iron Age aesthetics based on links with other places and other times.

Ditch sequences are also called into question, primarily at Alfred's Castle where there is some correlation between shape of ditch and date, but this is by no means comprehensive and straightforward. The life-histories of individual ditches are complex and apparently discontinuous: most of those at Alfred's Castle were re-cut or re-used at least once in a variety of combinations. The appearance of a ditch was also of concern, as witnessed by the lining of the two large linears at Alfred's Castle, where they were cut through by the small enclosure ditch, to give the appearance of a smooth, unified ditch cut through the chalk bedrock. At White Horse Hill we suspect that a ditch assumed to be a Late Bronze Age 'linear', was in fact constructed (and was certainly in use) much later. If this is true, it is not just that people re-used old features (the Romano-British fills in Iron Age pits at Uffington); they also made new versions of old types of features.

One question that needs to be addressed is whether this area of the Berkshire Downs is unusual in the variability of relationships between features? Is this simply a product of intensive excavation providing the level of detail required within a small area or is this a pattern found more generally? Whichever proves to be the case, we propose that an understanding of later prehistoric aesthetics is intimately bound up with doing archaeology today and that continuing to impose a typological approach to landscape is restrictive to both.

Acknowledgements

These ideas have resulted from many interesting discussions during the Hillforts of the Ridgeway Project. We would like to thank the many people involved, especially Patrick Daly whose D.Phil. is particularly relevant (Daly 2002). Floss Wilkins drew [Figures 1 and 3](#), Patrick Daly produced [Figures 4 and 5](#), and Tyler Bell [Figure 6](#).

Note

1. In completing the final report on the excavations at Segsbury, we have since significantly modified our ideas about the interpretation of the site (Lock *et al.* 2005).

Bibliography

- Avery, M. 1993. *Hillfort Defences of Southern Britain*. Oxford: British Archaeological Reports British Series 231.
- Barrett, J. 2001. Agency, the duality of structure, and the problem of the archaeological record, in I. Hodder (ed.), *Archaeological Theory Today*, 141–164. Cambridge: Polity Press.
- Bell, T. and Lock, G. 2000. Topographic and cultural influences on walking the Ridgeway in later prehistoric times, in G. Lock (ed.), *Beyond the Map: Archaeology and Spatial Technologies*, 85–100. Amsterdam: IOS Press.
- Bradley, R. 1997. *Rock Art and the Prehistory of Atlantic Europe*. London: Routledge.
- Collis, J.R. 1996. Hill-forts, enclosures and boundaries, in T.C. Champion and J.R. Collis (eds), *The Iron Age in Britain and Ireland: Recent Trends*, 87–94. Sheffield: J.R. Collis Publications.
- Daly, P. 2002. *Social Practice and Material Culture: the Use, Discard and Deposition of Ceramic Material at two Iron Age Hillforts in Oxfordshire*. Unpublished D.Phil. thesis, University of Oxford.
- Ford, S. 1982. Linear earthworks on the Berkshire Downs, *Berkshire Archaeological Journal* 71, 1–20.
- Ford, S., Bowden, M., Mees, G. and Gaffney, V. 1988. The date of the ‘Celtic’ field systems on the Berkshire Downs, *Britannia* 19, 401–404.
- Gell, A. 1998. *Art and Agency: the Anthropological Theory*. Oxford: Clarendon Press.
- Gingell, C. 1992. *The Marlborough Downs: a Later Bronze Age Landscape and its Origins*. Salisbury: Wiltshire Archaeological and Natural History Society Monograph 1.
- Gosden, C. 2001. Making sense: archaeology and aesthetics, *World Archaeology* 33, 163–167.
- Gosden, C. and Lock, G. 1998. Prehistoric histories, *World Archaeology* 30, 2–12.
- Gosden, C. and Lock, G. 2003. Becoming Roman on the Berkshire Downs: the evidence from Alfred’s Castle, *Britannia* 34, 65–80.
- Lock, G. and Gosden, C. 1997. The hillforts of the Ridgeway Project: excavations at Segsbury Camp 1996, *South Midlands Archaeology* 27, 69–

- Lock, G. and Gosden, C. 1998. The hillforts of the Ridgeway Project: excavations at Segsbury Camp 1997, *South Midlands Archaeology* 28, 53–63.
- Lock, G., Gosden, C. and Daly, P. 2005. *Segsbury Camp: Excavations in 1996 and 1997 at an Iron Age Hillfort on the Oxfordshire Ridgeway*. Oxford: School of Archaeology Monograph 61.
- Miles, D., Palmer, S., Lock, G., Gosden, C. and Cromarty, A. 2004. *Uffington White Horse and its Landscape: Investigations at White Horse Hill, Uffington, 1989–95 and Tower Hill, Ashbury, 1993–94*. Oxford: Thames Valley Landscapes Monograph 18.
- Piggott, S. 1931. The Uffington White Horse, *Antiquity* 5, 474–485.
- Richards, J.C. 1978. *The Archaeology of the Berkshire Downs: an Introductory Survey*. Reading: Berkshire Archaeological Committee Publication No. 3.
- Sharples, N. 1991. *Maiden Castle: Excavations and Field Survey 1985–6*. London: English Heritage Archaeological Report 19.
- Strathern, M. 1988. *The Gender of the Gift: Problems with Women and Problems with Society in Melanesia*. Berkeley: University of California Press.
- Strathern, M. 1999. *Property, Substance and Effect: Essays on Persons and Things*. New Brunswick: Athlone Press.

Settlement in Kent from 1500 to 300 BC

Timothy Champion

At a conference organised in 1979 by the Council for British Archaeology to review the archaeology of Kent (Leach 1982), various speakers lamented the deficiencies in the then current state of knowledge for their respective periods: 'The archaeology of the Neolithic period in Kent has been neglected' (Clarke 1982, 25); 'If the prehistory of Kent has been neglected in favour of the later periods, the Bronze Age has perhaps suffered worst' (Champion 1982, 31); 'Iron Age studies in Kent and the immediately adjacent territories have remained in something of a doldrum' (Cunliffe 1982, 40). Such gloomy assessments may have been somewhat over-pessimistic, especially in view of some of the work being done at the time by local amateur groups, but they were not totally unrealistic.

Twenty-five years later, it is interesting to reassess our knowledge of the Later Bronze Age and the Earlier Iron Age, and to ask whether a higher level of optimism is now warranted. At first glance, if the answer were simply to be based on evidence publicly available in traditionally published form, then it would still be very gloomy. There have been detailed publications of some important sites, e.g. the Middle and Late Bronze Age site at Coldharbour Road, Gravesend (Mudd 1994) or the Late Bronze Age complex at Monkton Court Farm, Thanet (Perkins *et al.* 1994), but they are very few in number compared to other areas of southern England such as Wessex, the upper Thames valley, or East Anglia. Such an answer would, however, represent a very limited view of our current state of knowledge concerning the later prehistory of Kent, or at least of the evidence available to form the basis for such an understanding. This more optimistic judgement is reflected in a recent review of the

research resource for the Iron Age in Britain (Haselgrove *et al.* 2001, 24–5). This assigns Kent to a group of regions where there is significant data available but not yet sorted into a regional framework, rather than to the so-called ‘black hole’ regions, where site types are unknown and little or no modern research has been carried out. As this paper will attempt to demonstrate, that perception is now a realistic one.

The practice of archaeology in Kent has in fact been transformed in the last twenty years, especially since 1989; that year saw the appointment of a County Archaeological Officer and the following year saw the publication of Planning Policy Guidance Note 16, *Archaeology and Planning* (PPG 16). These two critical innovations, in the professional organisation and legislative recognition respectively of archaeology, were absolutely fundamental to enabling anything like an adequate archaeological response to be made to the pressures of development and construction in Kent, stimulated not only by the general economic prosperity of southern England but also by the specific project of the Channel Tunnel, in particular the construction of the Channel Tunnel Terminal (CTT) at Folkestone and later the Channel Tunnel Rail Link (CTRL) through the county. In combination, these factors have laid the foundations for transforming our understanding of the region’s prehistory, but they have produced the knowledge in a new way that requires new methods of synthesis and interpretation. This paper will make a first attempt to survey the new evidence for the evolution of Later Bronze Age and Earlier Iron Age settlement in the county. First, however, it is necessary to consider the strengths and weaknesses of the data available.

The data: working with PPG16

The publication of PPG16 in November 1990 had enormous practical and professional implications, by moving the procedure for the treatment of archaeology from one where archaeological interests were considered *after* the granting of planning permission to one where archaeological remains were regarded as a material consideration in the process of deciding *whether* permission should be granted, and on what conditions. Much attention has been paid to the emergence of the distinct roles of curators and contractors,

and to the different patterns of professional practice in fieldwork, as a comparatively small number of large-scale rescue excavations have given way to a much larger number of field investigations of more varied character, including many small-scale evaluations. Less attention has been paid to the problems of using the results of all this activity for research purposes and in particular for regional synthesis. One of the great strengths of the currently available evidence is its sheer quantity and quality, even though much of it may be the partial evidence of sample evaluations rather than large-scale excavations of 'sites'. Ironically, however, this strength is also a potential weakness, as little of this material is published in the traditional sense, and perhaps within our current concepts of publication it will never be possible to publish more than a tiny proportion.

Whether because of this problem of publication and access, or for other reasons, there have been very few attempts to exploit the potential of this wealth of data for academic purposes. One excellent example is David Yates' study of landscape organisation in the Thames valley during the Later Bronze Age (Yates 1999; 2001). This was carried out by contacting the contractors known to be working in the research area and accessing the reports on relevant investigations. The alternative approach to this evidence is through the curators: the results discussed here are derived from an analysis of all recent work undertaken in Kent, carried out as part of a wider review of the later prehistory of the county. The Heritage Section of Kent County Council's Environment Service has systematically collected and indexed all the so-called 'grey literature' arising from archaeological investigations of any sort, and this archive, comprising well over 2000 items, now forms an invaluable and accessible source of evidence. Analysis of the material available up to the end of 2001 produced at least 160 reports with significant evidence of later prehistoric activity.

There are two very important limitations of the data that affect what it is possible to say about later prehistoric Kent. Many of the recent investigations are small-scale evaluations, and although these inform us about the general distribution of past settlement, they are not very helpful on questions of the internal organisation of sites and the nature of structures. There have been occasional examples

of larger-scale excavations, especially in advance of quarrying or big infrastructure projects such as road schemes or especially the CTRL. Unfortunately, none of these has yet been published: for example, enclosures of Late Bronze Age date have been totally excavated at Highstead, near Chislet, north of Canterbury, in advance of gravel quarrying (Champion 1980, 237), and on the Ramsgate Harbour Approach Road scheme (Dyson *et al.* 2000 with plan), while extensive, and possibly total, excavation of Iron Age settlement sites has taken place at Highstead, South Dumpton Down on Thanet (Perkins 1995, 468–70), and at various locations on the CTRL (Glass 1999). Publication of these sites will add enormously to our knowledge of the range of prehistoric structures and patterns of spatial organisation in the region. In the meantime, however, there are few published site plans more recent than that of Dumpton Gap, Broadstairs, Thanet, now nearly one hundred years old (Hurd 1909, pl. LVI); the totally excavated site of Later Iron Age date at Farningham Hill, in west Kent (Philp 1984, 7–71) is a rare exception. In any case, it seems likely that larger-scale interventions will always be outnumbered by much smaller ones, and the evidence accruing from this sort of archaeological assessment and evaluation will be more suitable for studies of general settlement distribution than of detailed intra-site organisation. The discussion that follows will reflect this fact.

The other problem is that the archaeological investigations undertaken in accordance with the principles of PPG16 are determined by a combination of factors involving development pressure and previously known archaeological evidence, which means that, although they are widely scattered, they are not a random sample of the archaeological record of the county. The geology and topography of Kent have had a profound effect on human settlement and communication in recent centuries, and may well have done so throughout prehistory, with a pronounced grain running east to west (Fig. 1). The chalk ridge of the North Downs slopes down northwards towards a coastal plain and the Thames estuary; a fold in the chalk forms the Hoo peninsula and the Isles of Sheppey and Thanet, which would both have been offshore islands in the first millennium BC. To the south of the Downs there is the Greensand belt, forming the Vale of Holmesdale, rising to another

ridge, beyond which are the clays and sands of the Weald. The roughly parallel, east-west zones created in this way are cross-cut by the valleys of the Stour and Medway rivers. Modern development has been heavily concentrated along the northern coastal plain and in the river valleys, while communication routes such as roads, motorways and railways have run east-west along the northern plain or the Greensand vale. Mineral extraction has also been mainly focused in the same zones, winning chalk from the dip slope of the Downs, sand from the Greensand belt and gravel from the river valleys and the former terraces of the Thames.

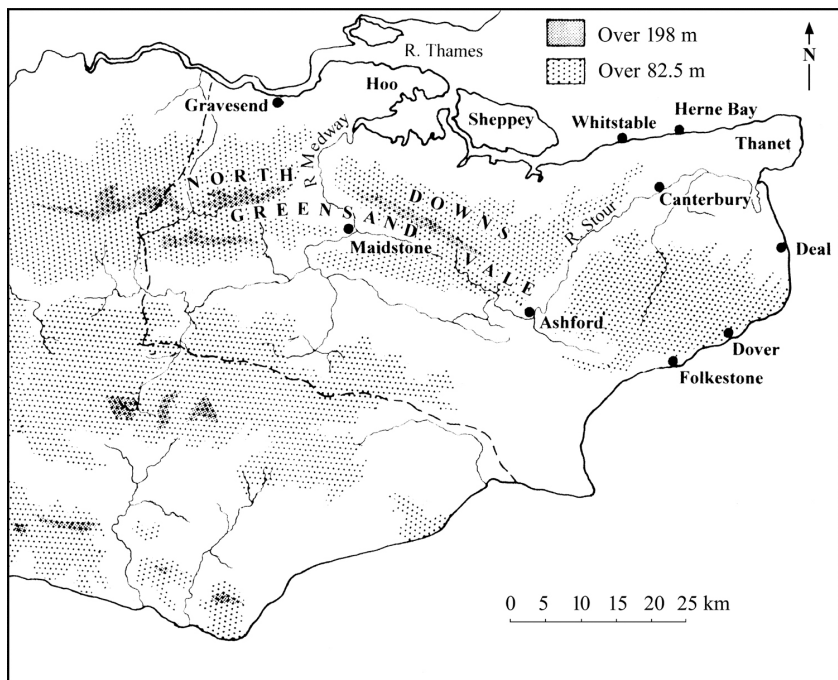


Fig. 1. Kent, showing major topographical features and modern places cited in the text.

Development pressure has thus been very variable throughout the county. The archaeological response to this pressure, in accordance with PPG16, has been to require prior investigation where there is a probability of evidence being present, and that has been primarily determined by the current state of knowledge as represented by the Sites and Monuments Record (SMR). That record is in turn based on

observations arising largely from earlier development from the nineteenth century onwards. The only major exception is the evidence from air photographs, which has been conditioned by other factors, especially the susceptibility of different soils and land use regimes; most such evidence has come from the chalklands, especially the less wooded and more arable or grassland areas east of the Stour valley between Canterbury and Dover. As it happens, little development has taken place on the chalk, other than on the Isle of Thanet, with the exception of occasional pipeline works (e.g. Ogilvie 1977) or some road improvement schemes such as that on the A2 between Canterbury and Dover (Macpherson-Grant 1980) or on the Dover to Sandwich road (Canterbury Archaeological Trust 1996, 319–20), and there has therefore been little opportunity to evaluate the photographic evidence in the field. The combination of modern development and the predictive potential of the SMR have therefore conspired to produce archaeological investigations in areas where the archaeology is already to some extent known, reinforcing previous knowledge but not shedding new light in areas of ignorance. The vast majority of such work in Kent has taken place along the northern lowlands between the foot of the lower slopes of the North Downs and the Thames estuary, including both Sheppey and Thanet, and along the Greensand vale at the foot of the scarp slope of the Downs between Folkestone, Ashford and Maidstone. Large parts of Kent have not been affected to any great extent, including the higher regions of the North Downs and the large area of the Weald to the south; the only area of chalkland affected to any extent has been Thanet and, to a lesser extent in recent years, Sheppey. The results that do arise from this analysis therefore need to be placed in the context of that bias if they are to be understood properly.

Problems of chronology

The problems discussed above are generic to the application of the principles of PPG16 throughout England, even if the contrast between areas investigated and areas ignored is sharper in Kent than in other counties. There is, however, a further difficulty specific to Kent, and that is the absence of an agreed terminology and chronology for the later prehistoric period. This is in part due

to real uncertainties about chronology, and in part to the variable usage of such terms as 'Late Bronze Age' and 'Early Iron Age', especially in reference to pottery.

The problem of terminology is perhaps endemic to a system where many contractors operate within the same region and finds reports are written by many different specialists. This variation has been aided by the lack of publication of major assemblages, which might form the basis for an accepted regional terminology, comparable to those employed in other areas of southern England. As it is, the evaluation reports and other documents are littered with a bewildering array of terms for the cultural affinity or chronology of pottery, and terms are often used with different meanings by different contractors, so that it is impossible to understand readily what is meant, for example, by the term 'Late Bronze Age pottery'. Only a considerable degree of familiarity with the contractors, their specialists and the actual material makes it possible to interpret and correlate their reports. Some reports show a lack of awareness of modern chronology, particularly when, especially in desktop assessments, older sources in the SMR are accepted without critical updating, thus giving us Late Bronze Age Collared Urns, or (a particular problem) Deverel-Rimbury pottery assigned to the Late Bronze Age, even though it has been firmly accepted as Middle Bronze Age (or even earlier) since the 1960s. More fundamental than questions of terminology, however, is the lack of an agreed chronological sequence for the region.

Pottery will inevitably be the basis for a regional chronology, yet surprisingly few large assemblages have been published. There are virtually no published stratified ceramic sequences or useful associations with more datable items such as metalwork, and there are few useful radiocarbon dates. It is not yet possible to define a regional ceramic chronology with the same degree of precision as has been achieved, for example, in the East Midlands (Knight 2002). In general terms, the sequence follows that established for southern and south-eastern England (Barrett 1980; Needham 1996): Deverel-Rimbury pottery, followed by plain and then decorated phases of post-Deverel-Rimbury pottery, although there is much less certainty over the ceramics of the Early and Middle Iron Age. There are also important differences in our knowledge of different parts of the

county.

Deverel-Rimbury pottery is well documented in funerary contexts from the county (Macpherson-Grant 1980, 166–73; Champion 1982, 34), but there is as yet only one published domestic assemblage: the lower fills of the ditch system at Coldharbour Road, Gravesend (Mudd 1994), with a radiocarbon date of 3085 ± 75 BP (OxA-4718). Several other important assemblages await publication, including those from Kemsley Fields, Sittingbourne (Macnee 2002), and various locations on the CTRL. There are, as yet, no large, well-dated assemblages of plain post-Deverel-Rimbury pottery: the later fills of the Coldharbour Road ditches (Mudd 1994) – with radiocarbon dates of 2895 ± 70 BP (OxA-4717), 2880 ± 65 BP (OxA-4719) and 2835 ± 45 BP (Q-3255) – the small assemblages from Welling (Couldrey 1988) and Hoo St Werburgh (Moore 2002), and some of the pottery from the ring-ditch enclosure at Mill Hill, Deal (Stebbing 1934; Champion 1980, 233–7 and fig. 6) may all belong here, as may sites located in the A2 improvement scheme near Bridge and Barham, southeast of Canterbury (Macpherson-Grant 1980, especially Sites 1, 5 and 8, Pit 20), but these collections are notable for their differences as much as for their similarity. Many other assemblages which are probably of this period still await publication, and the picture will not be clarified until several large sites with good dating evidence have been adequately analysed and published.

The following phase is the most confused as far as terminology is concerned, with the pottery variously referred to as ‘Late Bronze Age’, ‘Late Bronze Age/Early Iron Age’, ‘Early Iron Age’ or ‘decorated phase’. Again, pottery of this sort is well represented in the unpublished material, though there is little yet in print (Macpherson-Grant 1992). An important group of material from Monkton Court Farm, Thanet (Perkins *et al.* 1994), loosely associated with three small hoards of the Ewart Park phase, suggests that production of decorated vessels had begun before the eighth century BC, but there are few other clear indicators of chronology. A key site with a long sequence of structural evidence from the Late Bronze Age to the Roman period and important prehistoric ceramic groups was excavated at Highstead, north of Canterbury (Champion 1980, 237), and its publication will make a significant contribution

to knowledge of this period.

The pottery of the Early Iron Age is more problematic. In East Kent, a distinctive regional style of pottery production has been recognised. It is characterised by pots with deliberately roughened ('rusticated') surfaces and others with polychrome painted decoration. This 'East Kent Rusticated Tradition' has been tentatively identified at perhaps 20 to 30 sites (Macpherson-Grant 1989; 1991), but none of them has been published with a full ceramic analysis to modern standards. Analysis of a small assemblage from Dumpton Gap, Broadstairs, Thanet (Bryan 2002), suggests that the distinctive features of rustication and painted decoration may in fact be quite rare, or even absent, but that the tradition can be characterised by a recurring set of fabrics, forms and decoration. The key features of this pottery tradition have been used to link the assemblages with those now increasingly known and published in northern France and Belgium (e.g. Leman-Delerive 1984; Van Doorselaer *et al.* 1987; Hurtrelle *et al.* 1990; Blancquaert and Bostyn 1998). The forms, fabrics and decoration seem particularly close to those of the pottery excavated at sites found during Channel Tunnel operations (*ibid.*), raising important questions about the nature of cross-Channel relationships during the Early Iron Age. There are no metalwork associations for this ceramic tradition in Kent, and no radiocarbon dates, and its precise chronology is very uncertain: the general comparison to the north French assemblages, dated there to the Early La Tène period, suggests an approximate range of the fifth to the third century BC, but both its starting and its finishing date need further research.

This East Kent tradition has a markedly regional distribution, and has not been recognised in central and western parts of the county. In fact, contemporary pottery of the Early Iron Age is as yet unknown there. The important site at White Horse Stone, at the foot of the scarp slope of the Downs just east of the Medway, excavated in CTRL operations (Glass 1999, 194), seems likely to fill this gap for the central region, but the pottery and settlements of this period further west remain unknown.

There is a further difficulty in defining pottery assemblages that should be assigned to the Middle Iron Age. In the western part of the county there are large collections characterised by bowls with S-

profiles and footring bases, best described at Farningham Hill (Couldrey 1984), but also seen at other sites such as Oldbury hillfort (Ward Perkins 1944; Thompson 1986), Crayford (Ward Perkins 1938), and Greenhithe (Detsicas 1966). The chronological range of this type of assemblage is not yet firmly established. One group at Oldbury, including S-profile jars, footring bowls and curvilinear decoration, and described by Thompson as 'the most coherent group of late [*sic*] Iron Age pottery from the excavation' (1986, 283 and fig. 7, 16–24), may be associated with a hearth giving a radiocarbon date of 2210 ± 40 BP (Clark and Thompson 1989), but the strength of that association is not clear. Brooch associations at Farningham Hill suggest a date in the second century BC (Haselgrove 1997, 57), though how much earlier the tradition may have started is uncertain.

Also uncertain is how long such Middle Iron Age styles survived in the west of the county. At Farningham Hill, Couldrey (1984) suggests that they may have persisted as late as the Roman conquest, despite the absence of classic Late Iron Age forms (Thompson 1982); these are rare in west Kent, but certainly did exist in pre-Conquest contexts, for example at Thong Lane, Gravesend (French and Green 1983), by which time the earlier ceramic traditions may already have been replaced.

Similar Middle Iron Age assemblages from further east, however, are very rare. One such example was found at Bigberry hillfort, just west of Canterbury (Thompson 1983, 263 and figs 11–12, nos 57–105); this included footring bowls and jars, curvilinear decoration (nos 74a–b) and a rare example of a saucepan pot (no. 65), not a characteristic form in local assemblages, but a good indicator of approximate date. Most of the fabrics were grog-tempered, the dominant tradition of the Late Iron Age in the region, but the forms are earlier. Radiocarbon dates associated with this assemblage were 2080 ± 45 BP (BM-1530) and 2060 ± 50 BP (BM-1768N), which give a combined estimate at two sigma of 180 cal. BC to AD 20.¹ Comparable pottery assemblages are notable, however, for their scarcity or even absence in much of the east of the county, and the transition from the rusticated tradition to the better documented products of the Late Iron Age is yet another problem in need of further research, though it goes beyond the scope of this paper.

There is thus a pressing need to establish a well-documented and well-dated ceramic sequence for the whole of the county, and it seems unlikely that it will be possible for all researchers to adopt an agreed terminology before such improved understanding has been achieved. In the meantime, we have to live with the uncertainties of the current state of knowledge. As described above, these uncertainties are of three sorts. Perhaps the least problematic, and nearest to a possible solution, are those where the relative sequence is more or less well known, but the precise absolute chronology has not been established, as with the sequence from Deverel-Rimbury to Early Iron Age in east Kent or that from Middle Iron Age to Late Iron Age in the west. More problematic is the case where some well-documented assemblages exist, as with the Middle Iron Age group from Bigberry, but they are so rare that they raise difficult questions as to why more have not been found, given the extent of recent work in the region and the regular recovery of earlier and later assemblages. Most difficult is the case where we do not know what the pottery of a certain period looks like in a particular region, as with the Early Iron Age ceramics everywhere except in the easternmost parts of the county. As will be clear in the discussion of the evolution of settlement below, uncertainty over the completeness of the pottery sequence, as well as its precise dating, makes interpretation of the current data especially difficult.

Ordering the landscape

There is still a disappointing lack of environmental evidence for the history of human exploitation of the landscape of later prehistoric Kent (Champion 1980; Scaife 1987), but what evidence there is suggests a picture of intensified arable activity from about the middle of the second millennium BC. More recent evidence from Weatherlees Hill on the south coast of Thanet, however, gives a different picture of the environment there before the alluviation of the Wantsum Channel: in the Middle and Late Bronze Age there was still much oak and hazel woodland, although with evidence of clearance and possible cereal agriculture, while more extensive clearance and cereal cultivation did not occur before the Late Iron Age or early Roman period (Hearne *et al.* 1995, 303–23). It is not clear how uniform the process of intensified activity in the Bronze

Age really was, and only further work will clarify the picture. There have been few projects with an explicit aim of exploring the prehistoric development of the landscape, although the publication of the results from the CTRL research will greatly illuminate this theme. Given the site-specific nature of much recent work, it is perhaps understandable that few projects would have taken a wider view, but it is nevertheless rather disappointing that the collection, analysis and interpretation of environmental data has not been a routine part of archaeological investigations in the region.

The most important result to emerge from an analysis of the new data from Kent is the recognition of the extent of formal organisation of the landscape in the Middle and Late Bronze Age, a phenomenon broadly contemporary with the environmental evidence for agricultural intensification, and the subsequent history of land use. Throughout almost all of the area where modern investigations have taken place, this intensification of human exploitation is shown by the proliferation of organised systems of land division, in the form of rectilinear fields and droveways, typically surviving as parallel lengths of ditch. Almost all of the Kent examples have been recognised in small-scale evaluations rather than extensive excavation, and none is yet known in great detail. There is nothing yet to compare with the very complex and extensive landscape of field systems and enclosures that has been explored at Hornchurch on the other side of the Thames opposite Gravesend (Guttman and Last 2000). There is, nevertheless, more than enough evidence to show that parts of Kent, including especially the north coast and the Greensand vale, were exploited in this way in the Later Bronze Age.

Figure 2 shows the distribution of sites with evidence for this sort of land division dating to the Middle or Late Bronze Age. Given the small-scale nature of many of the interventions that have provided this evidence, and the problems of chronology discussed above, it is possible that some of the identifications are mistaken, as to either the nature of the human activity, or its date, or both, but the general pattern is secure. Field systems of this sort have now been recognised in several regions of southern England, and especially in the middle and lower Thames valley (Yates 1999; 2001). The results presented here, derived from independent research, are not exactly

the same as the account offered by Yates (2001). This is partly due to differences in geographical and chronological focus of the research projects from which they are derived, and in the time and method of data collection; it is also due to differences in interpretation of the evidence presented in contractors' reports, and in criteria for selection of sites. Nevertheless, the fact that there is substantial agreement over the general picture inspires confidence in both the method and the result.

It is clear that these field systems were not all established at once, and that during the lifespan of this episode of landscape history, which lasted perhaps seven or eight hundred years, there were significant changes in the focus and nature of these managed landscapes within the county. These changes can only be glimpsed at the moment, and the chronology is obscured by the problems of ceramic dating discussed above.

Some of these land divisions appear to belong to the Middle Bronze Age. At Coldharbour Road, Gravesend, a large ditch system comprising a droveway and enclosures was associated with Deverel-Rimbury pottery in the primary fills (Mudd 1994). The radiocarbon dates for this and the post-Deverel-Rimbury phase discussed above suggest that the system had a long life in the late second and early first millennia BC. Other sites in the region have a less clearly defined chronology, but are certainly of Middle or Late Bronze Age date, for example at Northumberland Bottom and Cobham Golf Course (Glass 1999, 196–7). The same chronology applies to sites in the Greensand belt: Blind Lane, Sevington (*ibid.*, 217–18), is certainly of Deverel-Rimbury date, while others such as Westhawk Farm (Booth and Lawrence 2000) are of Later Bronze Age origin. At some sites, a sequence of landscape organisation is visible: at Shrubsoles, Isle of Sheppey, a field system was overlain by a Late Bronze Age enclosure (Coles *et al.* 2003).

Field systems of this date are known in the Greensand zone between the Medway and the English Channel, and along the north coast from London as far east as the Herne Bay region. Despite much recent investigation, no definite example has been found in Thanet, and only one possible example of Late Bronze Age or Early Iron Age date on the chalklands east of Canterbury – parallel ditches observed at Wick Wood, Barham (Willson 1984) – may be

from such a field system. Instead, a different pattern of settlement is found in these regions, as we shall see below. Although settlement evidence has been found at some sites in addition to the ditches and wells, it is mostly small-scale and unenclosed – at Willow Farm, Broomfield, near Herne Bay, for example (Helm 2003). None of the systems of land divisions yet appears to be directly associated with large enclosures, as in some phases of the system at Hornchurch in Essex, although larger-scale excavation may well change that interpretation.

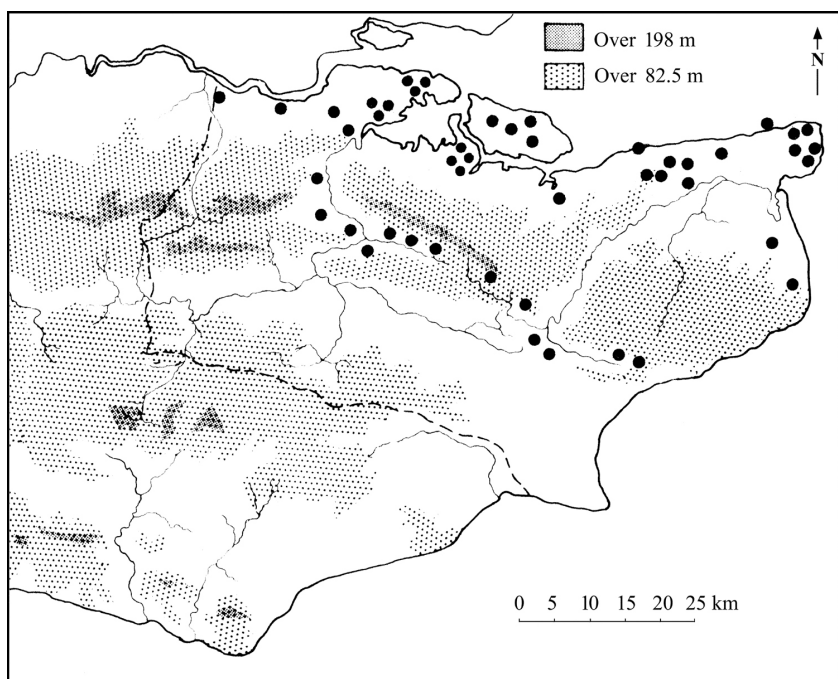


Fig. 2. Distribution of Middle and Late Bronze Age sites in Kent, showing field systems, enclosures and open settlements.

Yates (2001) has shown that similar field systems existed in zones throughout the lower Thames valley, and suggested a pattern of localised clusters of such systems associated with large enclosures and concentrations of metalwork deposited in hoards and in rivers. The results here extend this pattern to other parts of Kent. Pryor (1998) has argued that the detailed form of these fields was designed specifically for intensive livestock management, especially

sheep rearing. The presence of droveways and water holes in the field systems certainly supports the idea of pastoral usage, and the first regular occurrence of tools for the spinning and weaving of woollen textiles at the beginning of the Middle Bronze Age fits well with a pattern of intensive animal exploitation for non-food purposes. At Swalecliffe, near Whitstable (Masefield *et al.* 2003), a series of wells was in use for 500 years between 1200 and 700 BC; environmental evidence showed pastoral and arable activity, as well as salt making.

By contrast, [Figure 3](#) shows the distribution of sites that can be assigned to the Early Iron Age on the basis of their pottery, and it is clear that this is a markedly different distribution from that in [Figure 2](#). As with the previous map, there may well be uncertainties about the correct attribution of some of these sites, and there is a particular problem in that the pottery of this phase in the west of the county is not yet known.

There are two very striking features of this emerging pattern of prehistoric occupation in Kent and its neighbouring regions: the individual field systems show no sign of use after the Late Bronze Age, and the whole areas where they are found show very little evidence for subsequent occupation during the Iron Age. There are still very few radiocarbon dates and so the main evidence for the chronology of these land divisions is the pottery found in the silted ditches. Such pottery dates the process of abandonment and silting up, and so may be a better guide to their end-date than to their foundation. Within the limitations of our understanding of the pottery chronology, there is nothing to suggest usage after the end of the Late Bronze Age, but equally there is nothing to suggest that the end of all these organised landscapes was a single event, let alone that it coincided with any major change in pottery production or the production, circulation and deposition of metalwork. The same evidence for abandonment before the Iron Age has been noted by Yates (2001) throughout the Thames estuary region.

It is not just the case that this pattern of landscape organisation does not continue into the Iron Age. The regions where these fields had been common show very little evidence for any occupation in the Iron Age at all, before the very end of the period. In many locations in Kent the next observable phase of usage is often a

further system of fields with fills dated to the Late Iron Age or early Roman period. This sequence is recorded, for instance, at a series of sites along the CTRL transect: Northumberland Bottom; Cobham Golf Course; Blind Lane, Sevington; Little Stock Farm; and Church Lane (Glass 1999). This general pattern holds good not only along the northern coastal strip of Kent, but also in the Greensand vale.

The same pattern has been noted north of the Thames: in the Southend peninsula, where traces of Middle and Late Bronze Age occupation very similar to those in Kent are abundant, sites of the Early Iron Age and even more so of the Middle Iron Age are very uncommon (Wymer and Brown 1995, 157). In the Greater London area, too, Early Iron Age sites are rare in comparison to the plentiful sites of the Middle and Late Bronze Age (Wait and Cotton 2000, 105). In his survey of the whole region, Yates (1999) has also confirmed the ubiquity of this observation from the gravel terraces west of London downstream. On the other hand, the areas of east Kent where no Bronze Age fields are found are those where the densest evidence for continuous occupation into the Iron Age is also located.

Throughout the lower Thames region the pattern of recent work has been driven by the pressures of development, but the fact that the same results have been observed across the region and by many different archaeologists does suggest that we are dealing with a real feature of the prehistoric record rather than a random product of the present state of research. Although there may have been some exceptions, such as parts of Thanet and east Kent, there was a widespread uniformity in the long-term land-use history within the whole of the lower Thames estuary region. That itself is a phenomenon worthy of further investigation and explanation, just as much as the precise form that this uniform development took. It is possible to suggest a variety of explanations, not necessarily mutually exclusive, for the virtual absence of recognisable Early and Middle Iron Age settlement in these regions. Critically, it is as yet impossible to decide whether we are dealing with a phenomenon created by our current limited understanding – especially chronological – of the archaeological record, or a real feature of the prehistoric settlement sequence.

At one extreme, the apparent absence of Early and Middle Iron

Age sites in the regions where development-led archaeology has taken place could be the product of faults or misunderstandings in our local ceramic chronologies. If we have in fact recovered adequate samples of all the phases of a continuous ceramic sequence throughout Kent, but do not yet realise that fact, because of our flawed understanding of the true chronological and spatial variability of the pottery, then the apparent hiatus in the settlement record would disappear. The widespread homogeneity of this phenomenon throughout the lower Thames region may make this solution unlikely, but only the development of a much more robust ceramic chronology will resolve the question.

At the other extreme, the most dramatic explanation, accepting the current archaeological record as a true indicator of past settlement, would be that large tracts of the Thames valley were unoccupied in the Iron Age. Against this explanation is the fact that the available environmental evidence does not give any support to the idea of large-scale abandonment. If true, however, either in whole or in part, it would have very serious implications for our understanding of the evolution of prehistoric settlement, and raise difficult questions about the reasons for such large-scale shifts in the distribution of population in the region.

Another possibility could be that Iron Age occupation did indeed occur in these zones, but that we have not yet detected it. We have become so used to the idea of the Iron Age landscape of southern England being dominated by permanent settlements with substantial structures and enclosures in a setting of organised fields that any other form of occupation or exploitation is difficult to conceive of. Nevertheless, a landscape with no field divisions, perhaps exploited primarily for cereal production rather than the intensive pastoralism that demanded the organised divisions of the Later Bronze Age, and with unenclosed settlements comprising insubstantial structures, could conceivably have escaped notice despite the amount of recent investigation. That would be even more plausible if the associated material culture was minimal or undiagnostic; perhaps we should even consider whether parts of the region became largely aceramic for several centuries. It may be no coincidence that this period of about five hundred years is also marked by a complete absence of precious metals and of metal

hoards, and even a comparative scarcity of finds of iron objects. What we may be seeing is a return to the conditions of the two millennia of the Neolithic and Early Bronze Age, where agriculture was carried on without recognisable fields or settlements, before the reorganisations of the Middle Bronze Age. If so, the highly managed landscapes of the Middle and Late Bronze Age were not so much the beginning of a steady process of intensification marking the evolution of later prehistoric society, but an isolated and aberrant episode marking a departure from the normal form of agriculture and characteristic of a period of extreme intensification and social competition.

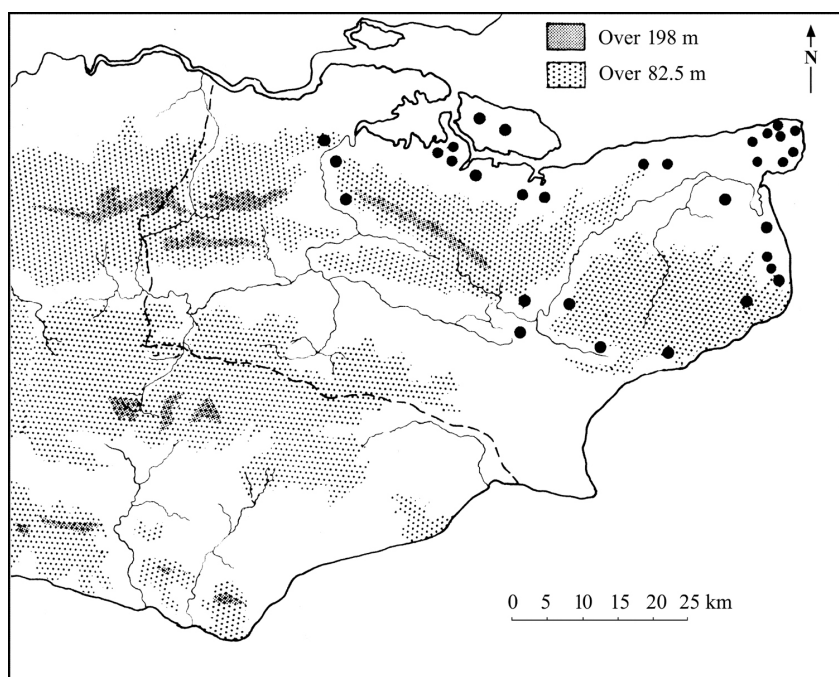


Fig. 3. Distribution of Early Iron Age settlement sites in Kent.

To revert to the Kentish evidence, it should be emphasised that, in the current state of knowledge, there are no systems of field divisions or other landscape organisation that can be securely dated, either in their establishment or in their exploitation, to any phase of the Iron Age before the last. The evidence of Iron Age occupation in east Kent is primarily in the form of settlement sites, but none of

these has been related to patterns of contemporary landscape organisation. Aerial photography has shown many so-called 'Celtic' field systems, especially on the chalklands of east Kent, but none of these has been dated, and they could as well be of Roman origin as any earlier. Despite the excavation of a growing number of Iron Age sites, there have been few detailed studies of the agricultural economy, but there is little reason to think that it was significantly different from that seen elsewhere in southern England, with a mixed regime of arable and pastoral adapted to the specific environment (Hambleton 1999). Throughout Kent, therefore, in the regions with Iron Age settlement sites as well as in those where none are yet known, we have no evidence as to how they actually farmed the land.

Another question also arises from the repeated sequences, noted above, of Later Bronze Age ditches followed by others of the Late Iron Age or early Roman period. It is possible that the density of occupation in the relevant regions in these two periods was such that random location of a field system in the Late Iron Age was bound to hit activity of the earlier period. We should, however, bear in mind the alternative possibility, that, whatever the nature of intermediate human activity at the site, the location of the later fields was deliberately chosen to coincide with the earlier. We do not yet know enough about the detailed settlement histories of these regions to decide the question, but the possibility of long-term memory of previous land use needs to be further investigated. Locations had their biographies, just as much as objects.

Settlement sites

The nature of recent archaeological investigation has, with the exception of some larger-scale excavations, been better suited to identifying the presence of ditched field systems and enclosures than of unenclosed sites, or to exploring the internal organisation of such sites. The detailed evidence for the internal arrangement of structures and activities is still poor. There are few house plans that are anything like complete, although enough fragments to show that roundhouses like those known elsewhere must originally have existed. Some field systems show evidence for occupation in the form of scattered features such as pits and possible structures. This

is best seen at Kemsley Fields, Sittingbourne, where occupation extended into the post-Deverel-Rimbury period (Macnee 2002); the evidence from Willow Farm, Broomfield (Helm 2003), has also been mentioned. It is quite possible that more of the sites mentioned below were originally integrated into an organised and divided landscape, but on present evidence that cannot be firmly established.

A different pattern is seen in Thanet and Kent east of the Stour in the Middle Bronze Age, where settlement enclosures are found. The best example is at South Dumpton Down (Perkins 1995, 468–70), where a roughly rectangular enclosure was totally excavated, with occupation in the interior demonstrated by pits and post holes. The ditch was an important location for placed deposits, and contained a hoard of Middle Bronze Age palstaves and a quoit-headed pin. At Eastry, north of Dover, part of an enclosure including the entrance was excavated; Deverel-Rimbury pottery was found in the ditch, and the presence of a Collared Urn may even suggest a slightly earlier date (Willson 1993). The concentration of enclosures in Thanet is associated with a striking cluster of Middle Bronze Age hoards there (Perkins 1988). In an analysis of Middle Bronze Age settlement patterns in southern England, Ellison (1981) predicted the existence of a major site of this period in Thanet; the concentration of metalwork deposits has grown since then, but no single site has been located, and Needham and Ambers (1994) have cast doubt on the reliability of such a prediction. Nevertheless, Thanet and east Kent do show a pattern of enclosure and deposition in the Middle Bronze Age that is quite distinct from most of the rest of Kent.

In the Late Bronze Age a wide variety of settlement types is now being revealed, both enclosed and unenclosed. One of the most striking forms is the circular enclosure typified by Essex examples such as Springfield Lyons or the two sites at Mucking, and often called ‘ringforts’; they show great care in the division of internal space and the location of structures, and are dated to the early part of the first millennium BC (Needham 1992). The site excavated at Mill Hill, Deal, in the 1920s is a good example, although little is known about its interior (Stebbing 1934; Champion 1980, 233–7). These ‘ringforts’ may be a very specific case of a wider class of Late

Bronze Age enclosures. Others are rectangular, such as Lofts Farm in Essex (Brown 1988), and a possibly similar site is known in Kent at Highstead (Champion 1980, 237). Others again are sub-circular, such as two more enclosures at Highstead, or one found at Hartsdown, Margate (Perkins 1996). Two recent excavations of Neolithic causewayed enclosures in Kent, at Ramsgate and Kingsborough Farm, Sheppey (Dyson *et al.* 2000), have also produced sub-circular Late Bronze Age enclosures immediately outside the earlier monument: whether this is pure chance, or the result of deliberate reuse of a significant location is not clear.

These and other enclosures of Late Bronze Age date are clustered in the eastern part of the county, albeit more widely distributed than the Middle Bronze Age precursors. Unenclosed sites are also known throughout the county, although their nature makes them more difficult to recognise than enclosures and they may be seriously under-represented in the known record. Sites of this sort on the Thanet Way at South Street and Radfall Corner, between Whitstable and Herne Bay (Allen *et al.* 1997), date to the Late Bronze Age, as do others at Monkton Court Farm on Thanet (Perkins *et al.* 1994) and at Cobham Golf Club in the west of the county (Glass 1999, 196–7).

The same diversity of site type continues into the Iron Age, although despite much work, the nature of settlements in this period still remains elusive. In Thanet, rectangular enclosures of the Iron Age have been reported from Dumpton Gap (Hurd 1909), South Dumpton Down (Perkins 1995, 468–70), Hartsdown (Perkins 1996) and elsewhere. The large and very complex occupation area at Dumpton has also produced sections of other curvilinear enclosures, and possibly also of unenclosed settlement. These sites are characterised by pits and post holes, although no complete structures have been revealed. Large areas of hilltop at North Foreland (Diack *et al.* 2000; Diack 2003) and possibly Fort Hill, Margate (Perkins 1997, 227), seem to have been enclosed by ditches, although the ditches are slight and not of the scale typical of hillforts elsewhere. At North Foreland, an extensive area of Iron Age settlement has been excavated, mostly belonging to the earlier part of the period, but with some later features; there was a fairly clear zoning of different structures, with clusters of post holes

separated from pits and a group of four-post structures enclosed in a small rectangular ditch.

At other locations in the east of the county, reports of Iron Age occupation are mostly limited exposures of pits or small sections of other features, possibly enclosure ditches. There are no reliable enclosure plans, and the probability is that many of the settlement sites of this period were unenclosed. This is supported by the evidence from two sites where larger-scale excavation has occurred. At White Horse Stone (Glass 1999, 194; Oxford Archaeological Unit 2000), pits and post holes were spread over a large area, with some measure of clustering to indicate the ordered use of space within the site. At Highstead, following the Late Bronze Age enclosures, the unenclosed Iron Age occupation was marked by a row of roundhouses, and an unusual rectangular building. This is the only example so far known in Kent of the unenclosed roundhouse cluster, a type of settlement characteristic of the Early to Middle Iron Age in many other parts of southern England. In the western part of the county, west of the Medway, almost nothing is known of Early Iron Age settlement, and recent work has failed to locate a single site.

Landscape with hillforts

The problem of identifying Middle Iron Age sites has been discussed above. Hillforts, however, certainly began to be built in this phase. Kent, like most of eastern England, was not a part of the hillfort dominated zone of the Early Iron Age. Hamilton and Manley (2000) have shown the sharply contrasting nature and chronology of hillfort building and use on either side of the Weald; in Sussex, many of the forts are on the high ridge of the South Downs and belong to the Late Bronze Age or the Early Iron Age, but in Kent and Surrey they belong to the Middle and Late Iron Age and show little evidence of dense occupation.

In east Kent the only certain hillfort is Bigberry, just west of Canterbury. It occupies a prominent position overlooking the Stour, and may have been the fortified place attacked by Caesar in 55 BC (Jessup and Cook 1936; Thompson 1983). Its origin is earlier than that, however: its ramparts are not well dated, but pottery from the interior (discussed above) could extend from the second century BC to the first century AD. The pottery and a possible structure suggest

some sort of occupation, and, apart from its possible defensive role, interpretation has concentrated on Bigberry as a precursor to Canterbury as a regional 'capital', supported by the presence of a collection of high-status ironwork. The lack of intensive occupation makes this unlikely, however. The ironwork has sometimes been taken as the evidence of elite occupation (e.g. Thompson 1983), but it is more likely to be a ritual hoard (Manning 1972). Other finds, such as a piece of horse harness deposited in a clay-lined water hole or a placed iron anvil (Thompson 1983), are of a similar nature. These might therefore suggest that we should see Bigberry as a place of ritual activity, not as an aristocratic residence or centre of regional politics.

Other hillforts are less well documented. Oldbury (Ward Perkins 1944; Thompson 1986) was first built in the Middle Iron Age. Internal occupation is sparse, but it contains a spring and a pond and there are reliable reports of gold coins from within the defences. It too may have been a special place for ritual activity. The two small forts at Castle Hill, Tonbridge (Money 1975; 1978) are an unusual pairing, and both seem to belong to the Middle Iron Age. So too does the first phase of High Rocks, Tunbridge Wells (Money 1968).

None of the Kent hillforts lies on the high ground of the North Downs, and with the exception of Bigberry, they are all situated west of the Medway and further south on the Greensand ridge or in the Weald. These areas were not heavily occupied in the Middle and Late Iron Age, and the forts mostly look south towards the area of the Weald that was beginning to be more heavily exploited then. They were in some way connected with this southward expansion, perhaps visible places where rights to the landscape were maintained.

Conclusions

This brief review of the state of knowledge concerning settlement evolution in Kent in the Later Bronze Age and Earlier Iron Age has raised more questions than it has answered. One certain conclusion, however, is that the post-PPG16 phase of developer-funded archaeology does produce results that can be usefully synthesised into a regional account, and that the picture that emerges will often

be radically different from anything previously suggested. The number of complete site plans is still very small, making it difficult to study intra-settlement organisation in any detail, but the evidence for the larger-scale picture of site types and settlement distribution has been transformed.

Some of the questions raised above will be resolved by further research on evidence already at our disposal. Detailed study of the available ceramic collections, together with a selective campaign of radiocarbon dating, should be sufficient to establish the true chronology of the pottery that we know about. Filling any gaps that might then still remain in the ceramic sequence will be a more difficult matter, however. The

settlement evidence as currently known suggests a degree of regional variation within the county, and that is another question that will need to be clarified. At the moment, enclosed settlement seems to be found predominantly in the eastern part of Kent in the Later Bronze Age and Earlier Iron Age, but this may be in part due to the greater concentration of research in that region in recent years.

The most important issue raised here has been the question of the 'missing' Early Iron Age phase. The scale of this phenomenon, noted throughout the lower Thames region, suggests that the answer will have very significant implications for our understanding not just of Iron Age settlement expansion and mobility, but of Iron Age society as a whole.

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Note

1. Calculated using OxCal v3.8. For the previously published dates, see Clark and Thompson (1989).

Bibliography

- Allen, T., Parfitt, K. and Rady, J. 1997. Thanet Way, *Canterbury's Archaeology* 1995–1996, 24–27.
- Barrett, J. 1980. The pottery of the later Bronze Age in lowland England, *Proceedings of the Prehistoric Society* 46, 297–319.
- Blancquaert, G. and Bostyn, F. 1998. L'âge du fer à Coquelles et Fréthun (Pas-de-Calais) (Fouilles du Transmanche 1986–1988), *Revue du Nord* 80, 109–137.
- Booth, P. and Lawrence, S. 2000. Ashford, Westhawk Farm, *Current Archaeology* 168, 478–481.
- Brown, N. 1988. A late Bronze Age enclosure at Lofts farm, Essex, *Proceedings of the Prehistoric Society* 54, 249–302.
- Bryan, E. 2002. *Iron Age Pottery from Dumpton Gap, Broadstairs, Kent*. Unpublished M.A. thesis, University of Southampton.
- Canterbury Archaeological Trust. 1996. Interim report on work carried out by Canterbury Archaeological Trust, *Archaeologia Cantiana* 116, 311–324.
- Champion, T.C. 1980. Settlement and environment in later Bronze Age Kent, in J. Barrett and R. Bradley (eds), *Settlement and Society in the British Later Bronze Age*, 223–246. Oxford: British Archaeological Reports British Series 83.
- Champion, T.C. 1982. The Bronze Age in Kent, in Leach 1982, 31–39.
- Coles, S., Hammond, S., Pine, J., Preston, S. and Taylor, A. 2003. *Bronze Age, Roman and Saxon Sites on Shrubsoles Hill, Sheppey, and at Wise Lane, Borden, Kent: a Landscape of Ancestors and Agriculture by the Swale*. Reading: Thames Valley Archaeological Services.
- Clark, A.J. and Thompson, F.H. 1989. Revised radiocarbon dates from three hillforts in Kent and Surrey, *Antiquaries Journal* 69, 303–306.
- Clarke, A.F. 1982. The Neolithic of Kent: a review, in Leach 1982, 25–30.
- Couldrey, P. 1984. The Iron Age pottery, in Philp 1984, 38–70.
- Couldrey, P. 1988. Report on the prehistoric pottery from Welling, *Kent Archaeological Review* 92, 43–47.
- Cunliffe, B. 1982. Social and economic development in Kent in the pre-Roman Iron Age, in Leach 1982, 40–50.
- Detsicas, A. 1966. An Iron Age and Romano-British site at Stone Castle Quarry, Greenhithe, *Archaeologia Cantiana* 81, 136–190.
- Diack, M. 2003. North Foreland Road, Broadstairs, *Canterbury's Archaeology* 2001–2002, 25–26.

- Diack, M., Mason, S. and Perkins, D.R.J. 2000. North Foreland, *Current Archaeology* 168, 472–473.
- Dyson, L., Shand, G. and Stevens, S. 2000. Causewayed enclosures, *Current Archaeology* 168, 470–472.
- Ellison, A. 1981. Towards a socioeconomic model for the Middle Bronze Age in southern England, in I. Hodder, G. Isaac and N. Hammond (eds), *Pattern of the Past: Studies in Honour of David Clarke*, 413–438. Cambridge: Cambridge University Press.
- French, D.A. and Green, P.W. 1983. A Late Iron Age site at Thong Lane, Gravesend, *Kent Archaeological Review* 73, 54–68.
- Glass, H.J. 1999. Archaeology of the Channel Tunnel Rail Link, *Archaeologia Cantiana* 119, 189–220.
- Guttman, E.B. and Last, J. 2000. A Late Bronze Age landscape at Hornchurch, Greater London, *Proceedings of the Prehistoric Society* 66, 319–359.
- Hambleton, E. 1999. *Animal Husbandry Regimes in Iron Age Britain: a Comparative Study of Faunal Assemblages from British Iron Age Sites*. Oxford: British Archaeological Reports British Series 282.
- Hamilton, S. and Manley, J. 2000. Hillforts, monumentality and place: a chronological and topographic review of first millennium BC hillforts in south-east England, *European Journal of Archaeology* 4, 7–42.
- Haselgrove, C. 1997. Iron Age brooch deposition and chronology, in A. Gwilt and C. Haselgrove (eds), *Reconstructing Iron Age Societies*, 51–72. Oxford: Oxbow Monograph 71.
- Haselgrove, C., Armit, I., Champion, T.C., Creighton, J., Gwilt, A., Hill, J.D., Hunter, F. and Woodward, A. 2001. *Understanding the British Iron Age: an Agenda for Action*. Salisbury: Trust for Wessex Archaeology.
- Hearne, C.M., Perkins, D.R.J. and Andrews, P. 1995. The Sandwich Bay wastewater treatment scheme archaeological project, *Archaeologia Cantiana* 115, 239–354.
- Helm, R. 2003. Willow Farm, off Hooper's Lane, Broomfield, *Canterbury's Archaeology* 2000–2001, 22–23.
- Hurd, H. 1909. On a Late Celtic village near Dumpton Gap, Broadstairs, *Archaeologia* 61, 427–428.
- Hurtrelle, J., Monchy, E., Roger, F., Rossignol, P. and Villes, A. 1990. *Les débuts du second âge du fer dans le Nord de la France*. Arras: Dossiers de Gauheria 1.
- Jessup, R.F. and Cook, N.C. 1936. Excavations at Bigbury Camp, Harbledown, *Archaeologia Cantiana* 48, 151–168.
- Knight, D. 2002. A regional ceramic sequence: pottery of the first millennium BC between the Humber and the Nene, in A. Woodward and

- J.D. Hill (eds), *Prehistoric Britain: the Ceramic Basis*, 119–142. Oxford: Prehistoric Ceramics Research Group Occasional Paper 3.
- Leach, P.E. (ed.) 1982. *Archaeology in Kent to AD 1500*. London: Council for British Archaeology Research Report 48.
- Leman-Delerive, G. 1984. Céramique laténienne domestique de la région lilloise (Nord), *Gallia* 42, 79–95.
- Macnee, B. 2002. *Bronze Age Pottery from Kemsley Fields, Sittingbourne, Kent*. Unpublished M.A. thesis, University of Southampton.
- Macpherson-Grant, N. 1980. Archaeological work along the A2, 1966–74, *Archaeologia Cantiana* 96, 133–183.
- Macpherson-Grant, N. 1989. The pottery from the 1987–89 Channel Tunnel Excavations, *Canterbury's Archaeology* 1988/89, 60–63.
- Macpherson-Grant, N. 1991. A re-appraisal of prehistoric pottery from Canterbury, *Canterbury's Archaeology* 1990/91, 38–48.
- Macpherson-Grant, N. 1992. A review of Late Bronze Age pottery from East Kent, *Canterbury's Archaeology* 1991/92, 55–63.
- Manning, W.H. 1972. Ironwork hoards in Iron Age and Roman Britain, *Britannia* 3, 224–250.
- Masefield, R., Branch, N., Couldrey, P., Goodburn, D. and Tyers, I. 2003. A later Bronze Age well complex at Swalecliffe, Kent, *Antiquaries Journal* 83, 47–121.
- Money, J.H. 1968. Excavations on the Iron Age hillfort at High Rocks, near Tunbridge Wells, 1957–1961, *Sussex Archaeological Collections* 106, 158–205.
- Money, J.H. 1975. Excavations in the two Iron Age hillforts on Castle Hill, Capel, near Tonbridge, 1965 and 1969–71, *Archaeologia Cantiana* 91, 61–65.
- Money, J.H. 1978. Excavations in the two Iron Age hillforts on Castle Hill, Capel, near Tonbridge, 1965 and 1969–71: supplementary note, *Archaeologia Cantiana* 94, 268–270.
- Moore, C. 2002. Late Bronze Age, Romano-British and Early/Middle Saxon features at Hoo St Werburgh, *Archaeologia Cantiana* 122, 259–274.
- Mudd, A. 1994. The excavation of a Late Bronze Age site at Coldharbour Road, Gravesend, *Archaeologia Cantiana* 114, 363–410.
- Needham, S.P. 1992. The structure of settlement and ritual in the Late Bronze Age of south-east Britain, in C. Mordant and A. Richard (eds), *L'habitat et l'occupation du sol à l'âge du Bronze en Europe*, 49–69. Paris: Comité des Travaux historiques et scientifiques.
- Needham, S.P. 1996. Chronology and periodisation in the British Bronze Age, *Acta Archaeologica* 67, 121–140.
- Needham, S.P. and Ambers, J. 1994. Redating Rams Hill and reconsidering

- Bronze Age enclosure, *Proceedings of the Prehistoric Society* 60, 225–243.
- Ogilvie, J.D. 1977. The Stourmouth–Adisham water-main trench, *Archaeologia Cantiana* 93, 91–124.
- Oxford Archaeological Unit. 2000. White Horse Stone: a neolithic longhouse, *Current Archaeology* 168, 450–453.
- Perkins, D.R.J. 1988. A Middle Bronze Age hoard from a prehistoric settlement site at St Mildred's Bay, Westgate-on-Sea, *Archaeologia Cantiana* 105, 243–249.
- Perkins, D.R.J. 1995. Report on work by the Thanet Trust for Archaeology, *Archaeologia Cantiana* 115, 468–474.
- Perkins, D.R.J. 1996. The Trust for Thanet Archaeology: evaluation work carried out in 1995, Hartsdown Community Woodland Scheme, *Archaeologia Cantiana* 116, 265–281.
- Perkins, D.R.J. 1997. A report on work by the Trust for Thanet Archaeology, *Archaeologia Cantiana* 117, 227–237.
- Perkins, D.R.J., Macpherson-Grant, N. and Healey, E. 1994. Monkton Court Farm evaluation, 1992, *Archaeologia Cantiana* 114, 237–316.
- Philp, B. 1984. *Excavations in the Darent Valley, Kent*. Dover: Kent Archaeological Rescue Unit.
- Pryor, F. 1998. *Farmers in Prehistoric Britain*. Stroud: Tempus.
- Scaife, R.G. 1987. A review of later Quaternary plant microfossil and macrofossil research in southern England, with special reference to environmental archaeological evidence, in H.C.M. Keeley (ed.), *Environmental Archaeology: a Regional Review, Vol. 2*, 125–203. London: Historic Buildings and Monuments Commission for England.
- Stebbing, W.P.D. 1934. An early Iron Age site at Deal, *Archaeologia Cantiana* 46, 207–209.
- Thompson, F.H. 1983. Excavations at Bigberry, near Canterbury, 1978–80, *Antiquaries Journal* 63, 239–278.
- Thompson, F.H. 1986. The Iron Age hillfort of Oldbury, Kent: excavations 1983–4, *Antiquaries Journal* 66, 267–286.
- Thompson, I. 1982. *Grog-tempered 'Belgic' Pottery of South-eastern England*. Oxford: British Archaeological Reports British Series 108.
- Van Doorselaer, A., Putman, R., Van der Gucht, K. and Janssens, F. 1987. *De Kemmelberg: en keltische bergvesting*. Kortrijk.
- Wait, G. and Cotton, J. 2000. The Iron Age, in M. Kendall (ed.), *The Archaeology of Greater London: an Assessment of Archaeological Evidence for Human Presence in the Area now covered by Greater London*, 101–117. London: Museum of London.
- Ward Perkins, J.B. 1938. An Early Iron Age site at Crayford, Kent, *Proceedings of the Prehistoric Society* 4, 151–168.

- Ward Perkins, J.B. 1944. Excavations on the Iron Age hillfort of Oldbury, near Ightham, Kent, *Archaeologia* 90, 127–176.
- Willson, J. 1984. Rescue work at Wick Wood, Barham, Kent, *Kent Archaeological Review* 77, 166–174.
- Willson, J. 1993. A Bronze Age site on the Eastry By-pass, *Kent Archaeological Review* 112, 38–47.
- Wymer, J.J. and Brown, N. 1995. *Excavations at North Shoebury: Settlement and Economy in South-east Essex 1500 BC–AD 1500*. Chelmsford: East Anglian Archaeology Report 75.
- Yates, D. 1999. Bronze Age field systems in the Thames Valley, *Oxford Journal of Archaeology* 18, 157–170.
- Yates, D. 2001. Bronze Age agricultural intensification in the Thames Valley and Estuary, in J. Brück (ed.), *Bronze Age Landscapes: Tradition and Transformation*, 65–82. Oxford: Oxbow Books.

The Atlantic West in the Early Iron Age

Jon C. Henderson

Introduction

Very little archaeological evidence can be confidently ascribed to the Early Iron Age (c. 700/600–400 BC) in north-western Atlantic coastal areas. In terms of positive Earlier Iron Age evidence, much of the Atlantic-facing land from northern Scotland to Armorica could aptly be described as the abode of dragons. Indeed, it is not even clear if there was an ‘Early Iron Age’ as such in many Atlantic areas, with more extreme interpretations suggesting a widespread depopulation as a result of the well-documented climatic downturn in the first half of the first millennium BC, leaving the remaining communities to cling on to ways of life established in the Late Bronze Age (Burgess 1974; 1985; Raftery 1994). There are very few settlements that we can confidently date to the period, while those sites we do know have generally produced rather undiagnostic material assemblages. Our ability to make inter-site comparisons in Atlantic areas is thus greatly reduced, making discussions about the area as a whole extremely difficult and attempts to characterise Early Iron Age societies virtually impossible.

Whilst acknowledging the restrictions of the archaeological data available, this paper aims to review the evidence for Earlier Iron Age settlements in the northern half of the Atlantic seaboard from Atlantic Scotland through Ireland, Wales and south-west England to western Armorica (Fig. 1). The discussion will then move on to consider the evidence for cultural contacts between Atlantic communities in the Early Iron Age.

The Atlantic Early Iron Age

There is no clear archaeological horizon between the end of the

Late Bronze Age and the beginning of the Iron Age in most of western Europe and this is especially true of Atlantic areas. Although the Atlantic bronze networks had gone out of use by the sixth century BC, there was not an automatic transition to iron technology. In fact it could be argued that iron was never a major part of Atlantic Iron Age societies, and it is far from clear whether iron objects were produced on a significant scale at all prior to the end of the first millennium BC. If anything, the trend in western coastal areas appears to be one of strong continuity in social practices and settlement from the Late Bronze Age into the Early Iron Age. For the Atlantic at least, then, the division between the two periods is especially arbitrary and the Early Iron Age is usually defined more on a lack of evidence (a lack of bronze deposition) than on positive grounds.

The beginning of the Early Iron Age is set here as the seventh century BC, mainly to fit in with the Iron Age elsewhere, but also because it marks the decline of the deposition of Atlantic bronzes, a practice that did not occur beyond 600 BC. The end of the Early Iron Age, the fourth century BC, ties in with the period of migrations in west central Europe. Whether these population movements had any direct effect on the Atlantic west is difficult to say, but regional settlement sequences from 400 BC display a greater level of local innovation and regionalism, characterised by the appearance of a more diverse range of enclosure forms in Wales, south-west England and Armorica, along with moves to more monumental forms of dry-stone architecture in Atlantic Scotland and potentially Ireland (Henderson 2000; Cunliffe 2001, 336–64).

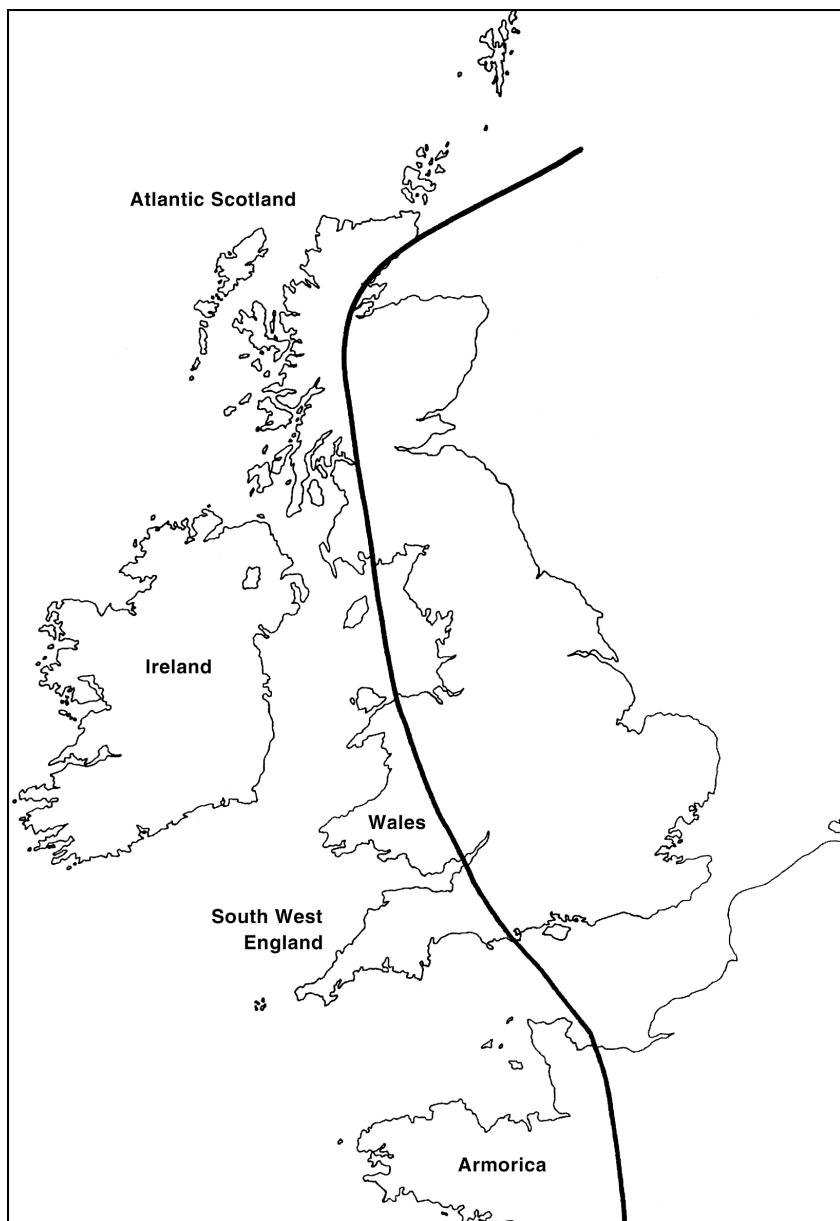


Fig. 1. The north-western Atlantic zone.

There was a significant drop in the imported and continentally-influenced material reaching Atlantic areas in the Early Iron Age – a lack of exchange activity that coincided with the decline of the

Atlantic Late Bronze Age exchange networks. This adds weight to the argument that it was a decline of interest in Atlantic tin and copper from iron-using communities in west central Europe, which ultimately brought an end to the Atlantic Bronze Age (Kristiansen 1998, 211–22). The end of the Atlantic bronze networks (which had included the whole of Britain) created a new dynamic, with southern and eastern England now looking towards the developing Iron Age communities of west central Europe, leaving the Atlantic west somewhat isolated. Certainly, from this point onwards, there is a clear and well-recognised zonation in British Iron Age settlement, the broadest differences being between a zone of largely non-defensive settlement in the east; the hillfort dominated landscape of the Marches and south central England; and a western Atlantic zone composed of small, strongly defended settlements (cf. Cunliffe 1991, fig. 20.6).

Early Iron Age settlement in the northwestern Atlantic zone

Compounding the chronological problems caused by undiagnostic assemblages, few sites can be absolutely dated very precisely due to the well-documented problems with the radiocarbon calibration curve over the period *c.* 800–400 cal. BC (Stuiver and Pearson 1993). Throughout the Atlantic areas, but especially in Scotland and Ireland, the dating of Atlantic stone-built settlements has been further blurred by a refusal to recognise that the latest (*i.e.* surviving) occupation may not be chronologically indicative of initial construction and occupation (Harding 1984; 2005). Monumental stone-built structures, if regularly maintained, could have remained in use for hundreds of years, leaving minimal traces of their primary occupation.

Although enclosed farmsteads occupied by single ‘households’ are the dominant Iron Age settlement type throughout north-western Europe, the small, strongly defended units found in the Atlantic west can be viewed as a distinctive form, most being isolated circular homesteads and/or enclosures. Atlantic social systems contrast in this respect with those further to the east. As Cunliffe (1997, 160) notes, the one essential characteristic binding Atlantic ‘communities together was a similar social structure based on the

family unit or lineage group.' Evidence for population centralisation beyond the family or lineage group is virtually non-existent.

Larger hilltop enclosures do occur from the Late Bronze Age onwards but they were never a major Atlantic type and there is little evidence that any of the Atlantic examples were densely occupied. There are very few hillforts in the Atlantic zone compared to areas further east, and certainly nothing to compare to the dense hillfort zones in Wessex, the Welsh Marches and eastern Scotland. Little is known about the interiors of northern Atlantic hilltop enclosures but roundhouses appear to be the norm. Rather than being permanently populated tribal centres, they more likely served as seasonal meeting places or assembly points for pastoral communities at annual festivals or at times of the year when flocks and herds needed to be gathered in.

In contrast to hillforts, numerous promontory forts are found along the Atlantic seaboard (Lamb 1980, fig. 1). Although activity on such sites spans the Neolithic to the early historic period (Sharpe 1992), the construction of ramparts to demarcate these promontories – and therefore the concept of a promontory fort or cliff-castle – is usually dated, on the limited evidence from excavations, stray ceramic finds, and analogies with other enclosures, to the Iron Age (Wheeler and Richardson 1957, 102–132; Lamb 1980, 62–64; Armit 1992, 96; Giot 1995, 276–283; Maguer 1996, 110–120).

A number of sites have provided evidence for the cutting of ditches during the earlier part of the Iron Age. For example, the ramparts at the univallate promontory fort at Gob Eirer on the Isle of Lewis were recently radiocarbon dated to the sixth century BC (Church and Gilmour 1999); the ditch cutting off the promontory at Dunbeg in Co. Kerry, Ireland, gave a radiocarbon determination in the eighth century BC (Barry 1981); dates from an early phase of defence at Dale Fort in Dyfed, Wales, centred around the same period (Williams 1988, 48); while the Catuélán ditch at Cap d'Erquy, Côtes d'Armor, has been radiocarbon dated to some time between the eighth and fourth centuries BC (Bender 1986, 64; Giot 1995, 277). Absolute dates are lacking elsewhere but ceramics belonging to the Earlier Iron Age have been recovered from a number of sites including Maen Castle, Trevelgue, and Castle

Kenidjack in south-west England and from Beg Monom in north Finistère (Maguer 1996, 114).

The Atlantic distribution of promontory sites has in the past been quoted as evidence for a distinct promontory fort tradition (Gordon 1940, 111; Wheeler and Richardson 1957, 5; Hogg 1972, 22; Lamb 1980, 6) or invasion (Hogg 1972, 15; Thomas 1972a, 78). However, given that the Atlantic has a particularly indented coastline and that the concept of enclosing a seaward promontory through the construction of one or more ramparts is a basic one that does not require an introduction from any particular area, these views are now rightly discredited. Promontories are everywhere exploited for defence and the practice cannot be used in isolation to sustain specific cultural identities. Even so, the widespread enclosure and use of promontories in the Iron Age demands more than simple deterministic interpretations, since in a very general sense it reflects commonalities in behaviour between Atlantic communities.

As with the few Atlantic hillforts, it seems unlikely that many promontory forts were densely occupied, as evidence for domestic activity is usually restricted to a few hut platforms, most often situated immediately behind the inner rampart. A great many examples display no clear internal structural evidence at all, which, taken with their often exposed locations, begs the question whether they were ever used as permanent settlements.

The function of promontory sites is a matter of debate. Given the diversity of types (univallate, bivallate and multivallate) and locations (from remote, inaccessible rocky outcrops to less elevated positions clearly approachable by sea), a range of functions certainly seems likely. Interpretations vary from site to site, including use as places of refuge; coastal expressions of enclosure forms found inland; ritual centres; or trading sites involved in maritime trade (e.g. Johnson and Rose 1982, 155; Quinnell 1986, 115; Cunliffe 1991, 259; Sharpe 1992, 65–68; Herring 1994).

To date, research on promontory forts has lacked a systematic approach, a useful classification, and, not least, thorough excavation programmes. Without more problem-orientated investigation it is difficult to describe the wider significance and role of these sites. At this stage, all that can be said is that there is evidence for the beginnings of their construction in the Late Bronze Age/Early Iron

Age, and that – given their close relationship to the sea – some of them could have played a role in the maintenance, or at least the expression, of shared Atlantic traditions and ways of life.

Circular arguments

Known Early Iron Age settlements tend to take the form of stone-built roundhouse sites. This in itself can be seen as an indication of continuity from Late Bronze Age forms, which in most Atlantic areas comprise small, usually stone-built, circular settlements, often associated with stone wall boundaries. It may be more than a coincidence that it was during the Late Bronze Age – when there is clear evidence for widespread contacts throughout the Atlantic zone through the exchange of distinctive metalwork forms – that circular settlement forms became widely established. In many areas, these circular forms represent the first evidence of permanent settlement on a substantial scale. This is not to say that domestic settlements did not exist earlier, but simply that they tend to be more ephemeral and difficult to detect. The Late Bronze Age is the point at which domestic settlements become a visible and major part of the landscape.

The occurrence of circular settlements along the western fringes of Europe, and their widespread and exclusive use in the British Isles, have led a number of authors to suggest that the circular form may represent one visible aspect of a cultural tradition distinctive from the rest of the European continent (Hodson 1964; Harding 1972; Bradley 1997).

Given the lack of excavation, it is difficult to assess whether the occurrence of roundhouses along the western seaboard in the Earlier Iron Age reflects wider Atlantic traditions. There is, of course, a distinct British tradition of roundhouse construction best viewed as a continuation and elaboration of ways of life developed when communities in Britain were fully involved in the Atlantic bronze exchange networks of the Late Bronze Age. It could be argued, however, that by the Earlier Iron Age the construction of substantial roundhouses and round settlements as isolated and imposing structures in the landscape, was more a feature of Atlantic British societies than those to the east. Given the paucity of Atlantic artefactual assemblages, we should perhaps view circular

settlements as an artefact category in their own right, as an expression of material culture. Certainly the monumental roundhouse sites of Atlantic Scotland in existence by the end of the first millennium BC were far more than passive domestic wrappers and were clearly designed to make powerful statements about their creators.

This is not to claim that the building of circular settlements is an exclusive practice of the Atlantic zone. It would be quite wrong simply to claim that the building of circular as opposed to rectangular or square dwellings is significant in itself. Building dwellings 'in the round' is widespread throughout the hunter-gatherer and mobile human populations of the world, but represents no link between such societies other than a common way of enclosing space around a central hearth. If anything the construction of circular buildings is the most logical development from the simple campfire arrangement or tent.

It would, however, be equally reckless to underestimate the significance of the appearance and style of dwellings to their respective societies. It is clear that domestic settings, living spaces, and the deposition of material within these spaces, are often arranged in highly structured ways. Moreover, in the later prehistoric period such structures were used not simply as domestic settlements, but also as the main setting for ritual activities. The structure of domestic space, its potential ideological significance, and the interweaving of domestic and ritual activities within that space have all been the subject of much recent study (e.g. Reid 1989; Hingley 1990; Fitzpatrick 1994; Parker Pearson and Richards 1994; Parker Pearson 1996; Parker Pearson *et al.* 1996; Oswald 1997). For Parker Pearson and Sharples (1999, 16), the domestic dwelling was 'a central arena of social relationships, a repository of traditional knowledge and values, and the principal artefact of integrated and symbolic action.' The significance of the circularity of Atlantic settlements, and of their layouts, then, may indeed reflect something deeper than simple functionality.

To give some idea of the regional similarities and differences in the north-western Atlantic zone, a brief survey of the Earlier Iron Age settlement evidence will now be attempted. The discussion will begin with Atlantic Scotland, which has the best studied settlement

sequence in the zone.

Atlantic Scotland

The dry-stone roundhouses found along the northern and western mainland and islands of Scotland can be referred to collectively as 'Atlantic roundhouses' (Armit 1990a; 1992; 1997), a term which includes the wide range of structures classified by other authors as brochs, semibrochs, duns, island duns, and galleried duns (cf. MacKie 1995; 1997; 1998; Parker Pearson *et al.* 1996; Parker Pearson and Sharples 1999; Sharples and Parker Pearson 1997; Sharples 1998). Armit subdivides the Atlantic roundhouse category into simple and complex forms. The former are simple thick-walled roundhouses, while the latter are substantial roundhouses where the walls display a range of architectural devices such as galleries, stairs, wall chambers and scarcements, previously ascribed to the *broch* tradition.

Most importantly for our present discussion, none of these architectural devices can be dated earlier than c. 400 BC implying that the structural form of the Earlier Iron Age was likely to have been a simpler circular walled roundhouse (probably best viewed as a development of the hut circle traditions established in the Late Bronze Age). As in most other Atlantic areas, there is a tradition of open, circular dry-stone settlement throughout most of Atlantic Scotland established during the earlier first millennium BC. These sites are very much under-studied, but hut circles incorporating stone walls are known from mainland northern and western Scotland, the Inner Isles and potentially the Western Isles (Armit 1996, 103–105). There are hundreds of such sites in Caithness and Sutherland (RCHAMS 1911; Mercer 1980; 1981; 1985; Fairhurst 1971; McIntyre 1999) and similar numbers in Argyll (RCAHMS 1971–1988). How these hut circle sites relate to the development of more massively built complex Atlantic roundhouse forms from c. 400 BC is unclear.

Evidence for simple, thick-walled, stone roundhouses of Earlier Iron Age date comes from Orkney at sites such as Bu (Hedges and Bell 1980; Hedges 1987), Pierowall (Sharples 1984), Quanterness (Renfrew 1979, 194), St Boniface (Lowe 1998), the Howe (Ballin Smith 1994), and Tofts Ness (Dockrill 1998). These sites date from

700 to 500 BC and can be envisaged as prototypes for the complex Atlantic roundhouse form. On the northern mainland, evidence for thick-walled circular roundhouses comes from Cnoc Stanger, Caithness (Mercer 1996), and potentially from a number of other surveyed but as yet unexcavated sites (RCAHMS 1911; Mercer 1980; 1981; 1985).

At present, the existence of simple Atlantic roundhouse sites of Earlier Iron Age date remains to be proven outside the Northern Isles if we restrict this label to thick-walled examples (i.e. a wall thickness greater than one metre). Traditionally, simple, solid-walled duns were believed to constitute the majority of stone-built forts in the Western Isles, but in every case to date excavation has revealed evidence of complex architecture calling into question the very existence of simple forms (Armit 1990b; 1992). If this apparent lack of simple roundhouses in the Western Isles is real and their dating parallels that of the Northern sites, Atlantic roundhouses in the west probably began, at the earliest, about 400 BC. This, on the biological evolutionary model, identifies the north as 'a place of origin' for the monumental roundhouse.

It can, however, be argued that by the Earlier Iron Age, there is a more widespread trend towards the architectural embellishment and development of the simple Late Bronze Age hut circle form in Atlantic Scotland. For example, excavation at Coille A'Ghasgain on the Isle of Skye (Wildgoose *et al.* 1993) revealed a hut circle with stone walls expanded to 2.4 m thick at the entrance to create an extended passageway similar to those of later complex Atlantic roundhouses. Coille A'Ghasgain was dated by a single radiocarbon date to the fifth century BC (Armit 1996, 103). The five hut circles at Kilphedir, typical of a common Sutherland class of hut circles, also had substantial enclosing stone walls that were significantly thickened at the entrance (Fairhurst and Taylor 1974). Hut circle groups excavated at Carn Dubh in Perthshire commonly occur as pairs of structures embedded in an enclosing wall that was, similarly, enhanced in the entrance area (Rideout 1995).

The Kilphedir sites date to c. 500 BC, while those at Carn Dubh were dated broadly from the Later Bronze Age to the Earlier Iron Age. Significantly, in terms of viewing these sites as prototypes to later complex forms, one of the hut circles at Kilphedir (Hut circle

V) was apparently re-occupied in the second century BC and the walls rebuilt on a more massive scale.

There has been a lack of concerted research on simple dry-stone hut circles, with work understandably focusing on the more impressive looking structures. For example, although Miket (quoted in Armit 1996, 104) claims that stone-built hut circles featuring expanded entrances occur in the Western Isles, they have still not yet been examined in any detail and no information is currently available on them. While the few known hut sites in the Western Isles are probably typical Bronze Age hut circles, some may date to the earlier Iron Age and display elements of architectural elaboration foreshadowing that facet of the later complex Atlantic roundhouses.

One area where substantial simple roundhouse forms may exist in considerable numbers is Argyll. The structures of Argyll have been conspicuously absent from most recent studies despite the fact that the area represents the greater part of Atlantic Scotland. The exception is the work of Nieke (1984; 1990), who tried to redress this imbalance by examining all the later prehistoric sites in Argyll so classified in the RCAHMS Inventories. Her work followed the strict traditional classifications as outlined by RCAHMS (Maxwell 1969), and consequently did not separate and analyse the multiplicity of structures in the area. Nieke's conclusions, especially on the dating of the dry-stone roundhouse sites, do not parallel the patterns now established for the rest of Atlantic Scotland – her *duns* class, for example, includes rectilinear, irregular and circular sites together and she dates them all to the first millennium AD.

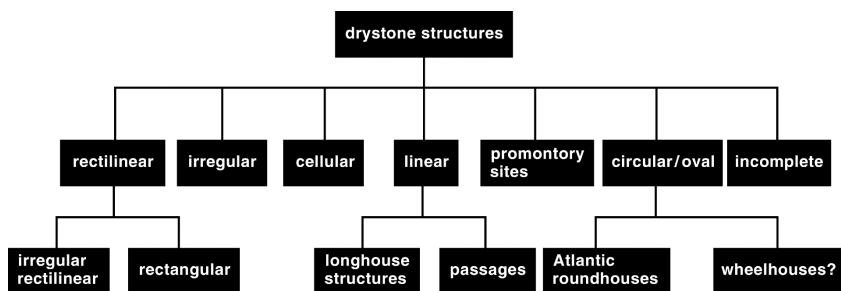


Fig. 2. Preliminary classification of dry-stone sites in Argyll (after Gilmour 1994).

While a good many sites classed by the RCAHMS volumes as *duns* undoubtedly do represent mid first millennium AD activity, the use of the portmanteau term masks the presence both of complex roundhouses and potentially of earlier simple Atlantic roundhouses. Using Armit's terminology, Gilmour (1994) has shown that three distinct types can be identified among the 306 sites previously classed as *duns* in Argyll: 95 are rectilinear sites; 23 irregular sites; and 188 Atlantic roundhouses (Fig. 2). Among the latter group, Gilmour (*ibid.*, 17–29) identified 23 complex sites and 144 simple roundhouses while 21 sites were classed as unknown, the latter mainly because of dilapidation.

The sheer number of simple roundhouses tends to imply that sites without complex architecture are a reality in Argyll, rather than an artefact of poor architectural preservation (*ibid.*, 48–51). If simple sites are seen to be earlier than complex examples then we might expect a number of these simple forms to date to the Earlier Iron Age. This would have implications for the view that the simple type originated in the north (cf. Hedges 1987). However, at this stage we cannot rule out the possibility that simple roundhouses were built and used alongside complex ones. Equally, some of the simple roundhouses might belong to the mid first millennium AD alongside the rectilinear examples.

The idea that at least some of the simple forms in Argyll represent Earlier Iron Age activity is given added weight by the evidence from the early excavations at Rahoy (Childe and Thorneycroft 1938). Rahoy is the only one of these sites in Argyll to have been excavated. The massive vitrified wall can be compared to the thick-walled structures of the Northern Isles. Dating evidence comprise a forged iron looped axe-head of Late Bronze Age type and a bronze La Tène IC brooch of later fourth or third century BC date (*ibid.*, 39–40). We can presume the former is early and transitional due to the unsuitability of iron for the creation of Late Bronze Age artefact forms. The excavation of other similar sites in Argyll is a major research priority.

It can be argued, then, that a trend towards architectural embellishment, especially around the entrances, was a feature of Later Bronze Age and Early Iron Age hut circles in north and west Scotland. More tentatively it could be suggested that substantial

dry-stone roundhouses existed throughout Atlantic Scotland (Fig. 3). In the Northern Isles, the simple stone roundhouses of the Earlier Iron Age represent a socially significant break from the indigenous cellular village agglomerations of Late Bronze Age date, represented by sites such as Jarlshof on Shetland (Hamilton 1956). If Earlier Iron Age simple forms exist elsewhere in Atlantic Scotland they are more likely to be a direct development from Later Bronze Age hut circle forms. Whatever their origins, the more substantially built forms of circular settlement dating to the Earlier Iron Age may be significant, as this might mean that the practice of marking out domestic settlement as a dominant landscape feature at this time was not restricted to the Northern Isles. As imposing structures that stand alone in the landscape, these forms may reflect a level of shared tradition and experience amongst the Earlier Iron Age communities of Atlantic Scotland.

It should not be expected that every Earlier Iron Age site in Atlantic Scotland will be a simple Atlantic roundhouse. The most exciting and potentially revealing site currently under investigation is the complex of six separate roundhouses dating from the eighth to the third centuries BC at Cladh Hallan, South Uist (Parker Pearson *et al.* 2000). Although it is too early to be certain, the initial results appear to confirm the use of stone-built roundhouses (albeit not thick-walled examples) in the Early Iron Age developing from existing Late Bronze Age forms. Equally the agglomeration of structures in one place at Cladh Hallan is reminiscent of Late Bronze Age forms in the Northern Isles. The site has also yielded evidence for bronze metalworking indicating the existence of wider contacts, as items were produced according to established Late Bronze Age styles and technology. Most interestingly this metalworking appears to continue into the Earlier Iron Age as indicated by the recovery of a disc of a wheel-headed pin that corresponds stylistically with one found at Garton Slack in East Yorkshire dated to the fourth century BC (*ibid.*, 27). The evidence from Cladh Hallan shows the importance of targeting Earlier Iron Age sites for excavation and suggests that the archaeological reality of this period in Atlantic Scotland may be much more varied and complex than currently perceived.

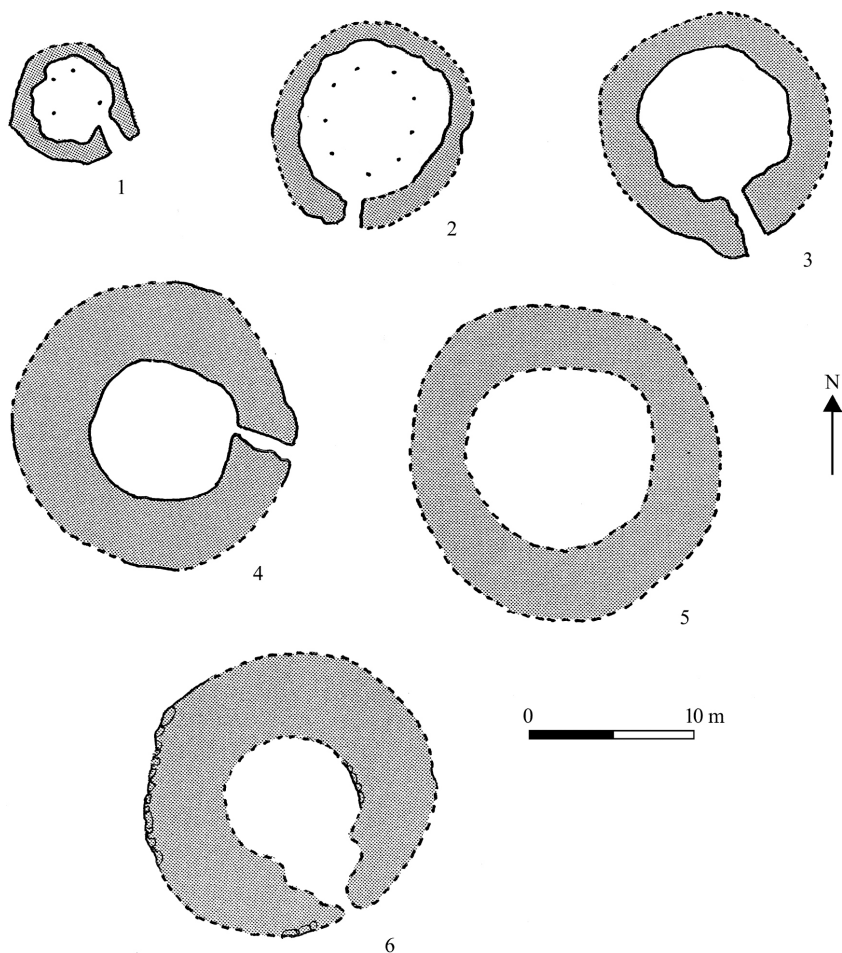


Fig. 3. Early Iron Age roundhouses in Atlantic Scotland: 1. Coille a'Ghasgain, Skye; 2–3. Hut circles I and V, Kilphedir, Sutherland; 4. Bu, Orkney; 5. Rahoy, Argyllshire; 6. The Howe, Orkney.

Cultural contact in Atlantic Scotland

As we have seen, there is some evidence to suggest that the move towards more substantial forms of round-house began in the Earlier Iron Age. This general shift in attitudes towards domestic settlement may also indicate some level of shared cultural experience between Atlantic Scottish communities. The main problem with such a view, however, is that, general settlement similarities apart, there is no evidence for direct cultural contacts between particular areas.

Material assemblages at this time and indeed throughout the Iron Age are, like those from other Atlantic areas, predominantly utilitarian and not sufficiently diagnostic to demonstrate contact through trade.

During the Late Bronze Age, material assemblages were more ornamental and more indicative of long-distance contact. Along with the many single finds of bronzes, there is evidence for larger metalwork assemblages like those from Jarlshof on Shetland (Hamilton 1956), the Adabrock hoard from Lewis (Coles 1960, 50; Armit 1992, 101), and the considerable assemblage from Dunagoil on the Isle of Bute (Marshall 1964).

Evidence for contacts in the Iron Age is not focused on the exchange of elaborate bronze metalwork forms but instead through the adoption of distinctive monumental building styles. The emergence of complex Atlantic roundhouse forms began sometime after 400 BC, with fully developed complex towers such as the famous examples of Dun Carloway, Lewis, and Mousa, Shetland, occurring not earlier than 100 BC (Henderson 2000). However uncertain our current perception of the date and duration of the various types of complex Atlantic roundhouse, their proliferation along the Atlantic Scottish province by the end of the first millennium BC is, *de facto*, convincing evidence for maritime contacts along that seaboard. In other words the widespread use of distinctive architectural devices on roundhouse sites from 400 BC throughout Atlantic Scotland reflects some level of maritime contact within that zone.

What happened between the end of the Late Bronze Age and the appearance of complex roundhouse forms c. 400 BC is less clear. The occurrence of more substantial forms of roundhouse in the Early Iron Age may indicate that there was no break in shared cultural trends between areas from the Late Bronze Age into the later first millennium BC. The recovery of utilitarian assemblages from Earlier Iron Age sites, typically consisting of a few flints, hammerstones, spindle whorls and saddle querns, may not indicate extensive trading contacts but does reflect the existence of similar ways of life.

The occurrence of decorated pottery throughout the Iron Age does distinguish Atlantic Scottish communities from those in the

rest of Scotland. Motifs and styles are similar throughout the area but there appears to have been no exchange of vessels themselves. According to the results of Neutron Activation Analysis carried out on some of the Hebridean ceramics (Topping 1987), vessels appear to have been produced and distributed locally, albeit using a more widely occurring repertoire of similar, but by no means identical, decorative styles. These two shared and distinctive features – substantially built roundhouses and decorated ceramics – imply that communities were not only developing according to their own strong internal trajectories but were also aware of what was happening elsewhere in the region. Regionalism and local distinctiveness occurring within an overall shared cultural milieu is the most instructive way to view developments in Atlantic Scotland – and this in microcosm is the nature of similarities throughout the north-western Atlantic zone.

Ireland

There are thousands of circular dry-stone sites along the western Atlantic coast of Ireland which, taken as a whole, represent a diverse and varied group of structures. Despite this, the positive identification of Iron Age settlements has been a major problem in Irish archaeology. I have argued elsewhere that there may be a similar – but as yet completely unrecognised – development of complex dry-stone forms in Ireland broadly contemporary with those in Scotland and indeed wider Atlantic trends (Henderson 2000). The problems in the recognition of this earlier horizon arise from the very broad ringfort terminology that, by definition, dates sites to the sixth century AD or later, and the failure to recognise Iron Age assemblages and therefore periods of earlier occupation at settlements traditionally dated later.

Iron Age assemblages are poorly defined in Ireland and are often only recognised due to the presence of La Tène metalwork. This is problematic in areas where metalwork is not prolific, as is the case in much of the Atlantic west, let alone the fact that La Tène metalwork is rarely found at settlements (Caulfield 1981, 207). The identification of Earlier Iron Age occupation (c. 700/600 to 400 BC) is especially difficult, given that in Ireland La Tène metalwork is thought to date from the third century BC and later (Raftery 1984).

The fact that an Earlier Iron Age assemblage would be undiagnostic – consisting presumably of a few hammerstones, spindle whorls and perhaps the odd saddle quern – may partially explain the lack of success in identifying Earlier Iron Age occupation. The situation is not helped by the fact that Ireland, like much of Wales, appears to have been largely aceramic in the Iron Age, presumably implying that domestic containers were made from perishable organic materials such as wood (Earwood 1993).

What can be said is that there is a tradition of building circular domestic settlements in Ireland during the Bronze Age and in the Early Christian period. It seems likely therefore that circular domestic forms from the Earlier Iron Age would also exist amongst the mass of unexcavated sites. There is some evidence to support this assumption. Two stone enclosures from Aughinish Island, Co. Clare, yielded saddle querns, coarse pottery and corroded iron in levels dated to the Late Bronze Age/Early Iron Age transition (Kelly 1974, 21; Limbert 1996, 282). At Navan, Co. Antrim, the Late Bronze Age/Early Iron Age phase (Lynn 1992) can be interpreted as a phase of domestic occupation analogous in enclosed area and shape to ringforts (Raftery 1994 fig. 7; Limbert 1996, 50).

Excavations at the famous site of Dún Aonghasa on the Aran Islands revealed Late Bronze Age occupation pre-dating the monumental dry-stone walls, attributed to the first millennium AD by the excavator (Cotter 1993; 1995; 1996; 2000). Structural evidence of Late Bronze Age occupation came in the form of a series of small stone-revetted circular buildings within and (at least partly) underlying the multi-faced inner enclosure wall (Fig. 4). Finds in the form of clay moulds for swords, spears, rings, and pins indicated an Atlantic island community in touch with the wider metalwork fashions and technology of the day.

Although the excavated structural evidence is all considered by the excavator to belong to the period 1000–800 BC, the radiocarbon dates suggest a much longer period of occupation and use (Henderson 2000, 131–3). In particular, dates obtained from Hut 2 and from a stone-lined tank imply that occupation continued well into the Earlier Iron Age (Cotter 1995, 11). Significantly, these dates, unlike many from the site, are associated with structural remains. It is worth mentioning that prior to the *Discovery*

excavations, the principal dating evidence for Dún Aonghasa came from a bronze fibula of Early Iron Age type found in the interior of one of the walls (O'Donovan 1839, 106).

In the absence of anything approaching a regional sequence or localised examination of sites it is not yet possible to examine the relationship between distinct areas within Ireland, as was done for Atlantic Scotland. Presumably, however, areas along the Atlantic coasts of Ireland could have been related to each other in a similar way: distinct regional sequences within a wider Atlantic network of contacts and influences.

North-west Wales

Dry-stone hut circle settlements of varying complexity, often with associated field systems, are found in considerable numbers in north-west Wales. Many authors consider that the unenclosed, upland stone hut sites are of Bronze Age date, while the enclosed forms belong to the Iron Age (e.g. Cunliffe 1991, 269–271; Kelly 1991; Davies 1995). While many of these forms resemble types seen elsewhere in the Atlantic west, any further insight is next to impossible due to the lack of a reliable chronological framework for the area (Smith 1974; 1977; Kelly 1988; 1991).

There are other site types in north-west Wales that further complicate an already diverse and largely undated settlement record. Small multivallate enclosures are seen in coastal areas, as at Castell Odo in Caernarvonshire (Alcock 1960), which began as several circular timber houses dating from the fifth to the fourth centuries BC and then developed in the fourth to third centuries BC into a complex, enclosed ringfort probably best compared to those seen in south-west Wales. Unusually for western Britain, north-west Wales has some large hilltop settlements featuring c. 20 to 80 circular stone huts usually enclosed by stone ramparts, such as Tre'r Ceiri, Garn Boduan, and Conway Mountain, all in Caernarvonshire (Hogg 1960). Unfortunately these are undated but are probably best compared with the upland enclosures of south-west England.

South-western England and Wales

The settlement patterns in the peninsula of south-west England and south-west Wales have much in common and can be considered

together. However, identifying the settlement types potentially of Early Iron Age date – namely coastal promontory forts and univallate enclosures – is difficult. Firstly, both settlement types could have been in use any time from the end of the second millennium BC well into the first millennium AD. Secondly, there are problems with the contrasting terminologies used in each area and the baggage that goes with those terminologies.

In south-west Wales, the dominant settlement type of the sixth to fourth centuries BC is the univallate enclosure delimited by an earthen or stone rampart (Williams 1988; Davies 1995; Williams and Mytum 1998). Due to the fact that the enclosures occur mainly in defensible locations such as hilltops or inland promontories, sites of this earlier period are often designated as hillforts. However, the majority of these sites, at under 1.2 hectares, are small and often consist only of a single enclosing rampart making it perhaps more appropriate to refer to them simply as strongly defended univallate homesteads. Indeed, they find their closest parallels with enclosures referred to as homesteads in south-west England and Armorica.

In south-west England, the main Iron Age settlement form is thought to have been the small univallate enclosure or 'round' (Thomas 1966; Johnson and Rose 1982). Rounds are simple banked and ditched enclosures usually featuring one entrance with a few huts placed inside, typically close against the bank. Enclosing about one hectare, and generally circular or oval in plan, they have their closest comparisons with enclosures found in south-west Wales and western Armorica. Despite their very broad definition, rounds are considered in most general works to be a distinct type occupied between the second century BC and the fifth century AD – although none are thought to have been constructed after the third century AD (Pearce 1981, 107–9; Todd 1987, 222–7; Cunliffe 1991, 182).

The dating of occupation on rounds mirrors the problem in recognising earlier occupation on Irish ringforts. There are relatively few modern published excavations, so that most sites are dated through the occurrence of loosely dated ceramic forms, exotic imported items, or from morphological characteristics. Using such raw criteria for dating tends to mask the existence of long periods of occupation and could potentially ignore evidence for Earlier Iron Age activity. Once again we are faced with the problems of what

would constitute an Earlier Iron Age assemblage.

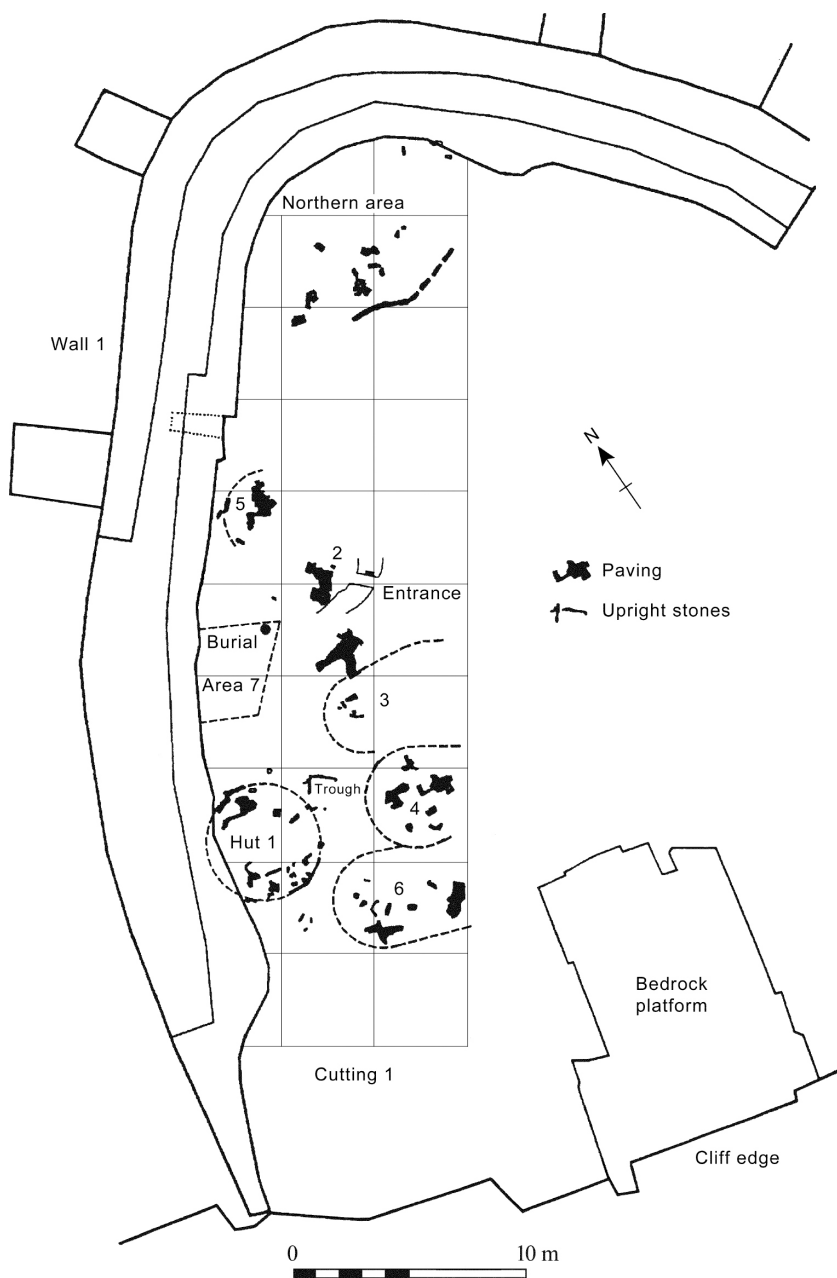


Fig. 4. Features attributed to the Late Bronze Age at Dún Aonghasa, Co. Galway (after Cotter 1995).

Those settlements which can be dated to the beginning of the Iron Age in south-west England occur in the high moorlands of Dartmoor, Exmoor, Bodmin and Penwith. As in most Atlantic areas, they appear to be a direct continuation of types established in the Late Bronze Age. Stone-built enclosures such as Kestor and Foale's Arrishes on Dartmoor; Bodrifty in Cornwall; Garrow Tor on Bodmin; and Dainton, south Devon, were occupied or began in these areas in the mid-first millennium BC.

On closer examination these enclosures can be seen to be very similar in layout and appearance to the round enclosures dated to the Later Iron Age. They are considered to be different because they occur on higher ground (and are therefore viewed as a continuation of Late Bronze Age traditions), while rounds occur on lower land. This may be true but the similarities remain intact.

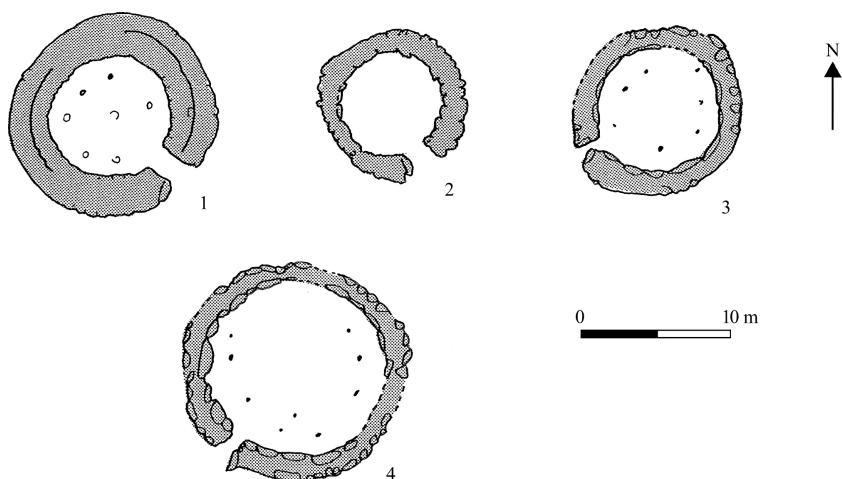


Fig. 5. Roundhouse plans from Bodrifty and Kestor, Cornwall: 1–2. Huts E and C, Bodrifty; 3–4. Hut 1 and the Main hut, Kestor (after Dudley 1956; Fox 1955).

There is some evidence for the construction of stone-built roundhouses at these sites in the Earlier Iron Age ([Fig. 5](#)). The site of Bodrifty in Cornwall (Dudley 1956) is a scatter of about 20 stone roundhouses amidst an extensive field system ([Fig. 6](#)). There are no absolute dates, but the forms of the earliest pottery suggest a date between 800 and 400 BC. The size of the roundhouses was considered to have a chronological significance by the excavator

and this observation was partly borne out by the excavations. The early, undecorated forms of pottery were present in all the excavated roundhouses, but later, decorated forms were found exclusively in the three more substantial examples (Fig. 6, A, C, E). The occurrence of South-Western Decorated pottery and cordoned ware implies continued occupation between the fourth and first centuries BC.

The site of Kestor in north-eastern Dartmoor consists of 27 circular stone huts amidst a network of rectilinear field systems. The largest house was excavated, along with one of the smaller ones and its adjoining paddock and field (Fox 1955). The smaller house, c. 10 m in diameter, was well built and comparable to those at Bodrifty. Of more interest, in terms of comparison with later forms, is the larger oval stone enclosure, known as the Round Pound, which enclosed a large single roundhouse, c. 11.3 m in diameter (Fig. 7). Both houses were dated to the Early Iron Age on the basis of the pottery and the fact that peat growth had already begun prior to their foundation (*ibid.*, 36; Silvester 1979). No South-Western Decorated pottery was recovered, suggesting that occupation did not continue much into the Later Iron Age.

Other largish stone roundhouses with similar pottery and built within enclosures are seen at Foales Arrishes (Silvester 1979), Shovel Down, and in the last structural phases at Shaugh Moor Enclosure 15 (Wainwright and Smith 1980; Quinnell 1994, 77). By being more massively built than the pre-existing Bronze Age hut circles, these larger houses could have been following the wider British Iron Age trend towards the construction of imposing large roundhouses, perhaps implying an Earlier Iron Age date for the start of this phenomenon in south-west England. Whatever the case, such enclosures surely provide a link between the univallate enclosures of the Late Bronze Age and those of the later Iron Age.

There was certainly a move to lower locations precipitated by increasing peat growth on the moorlands, but it is no longer appropriate to view this change as creating a major social upheaval (*contra* Pearce 1981; Bell 1984; Todd 1987; Cunliffe 1991). Caseldine and Hatton (1994) have shown that peat growth can be very localised and that different sequences can be expected on parts of the same moor. The shift to lower land occurred over a few

centuries and communities at lower altitudes, as on Bodmin Moor, were probably less affected. It is unlikely that the climate caused noticeable periods of stress to family groups within their lifetimes. The worsening climatic conditions would be imperceptible, and adaptations in subsistence practice and ultimately settlement locations would occur gradually, rather than in the form of a mass exodus from upland areas. Ways of life in the west of the peninsula in particular seem to have continued much as they had since the Late Bronze Age, whereas communities in the centre and east of the peninsula had to adapt and move to lower land, not overnight but over a period of a few centuries. This difference is reflected in the distribution of multiple enclosure forts from the fourth century BC throughout Devon and areas of eastern Cornwall, but not in the west, where only univallate *round* enclosures are found.

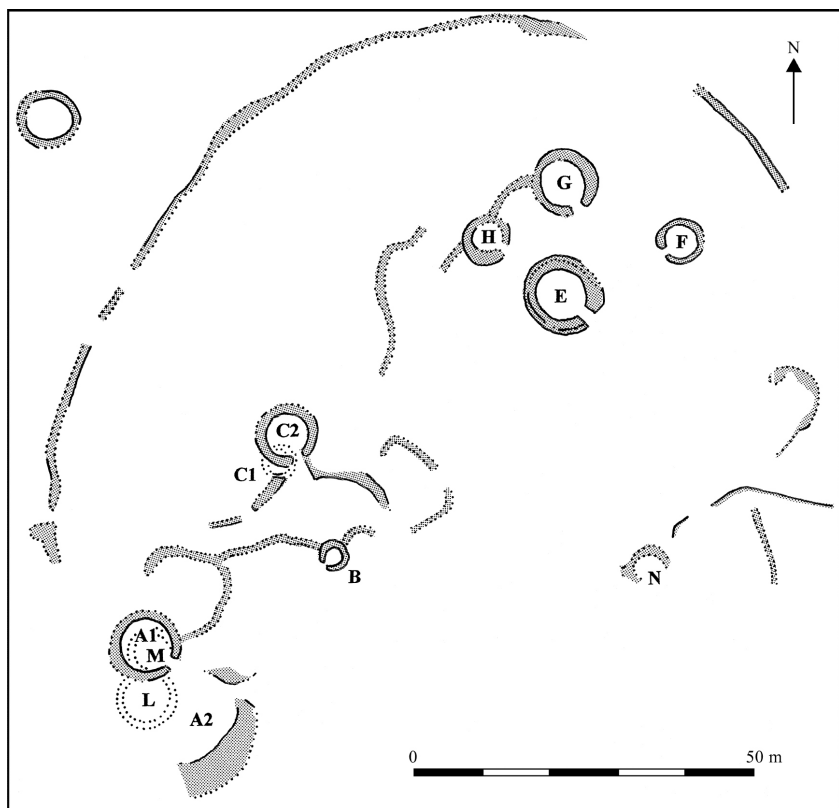


Fig. 6. The settlement at Bodrifty, Cornwall (after Dudley 1956).

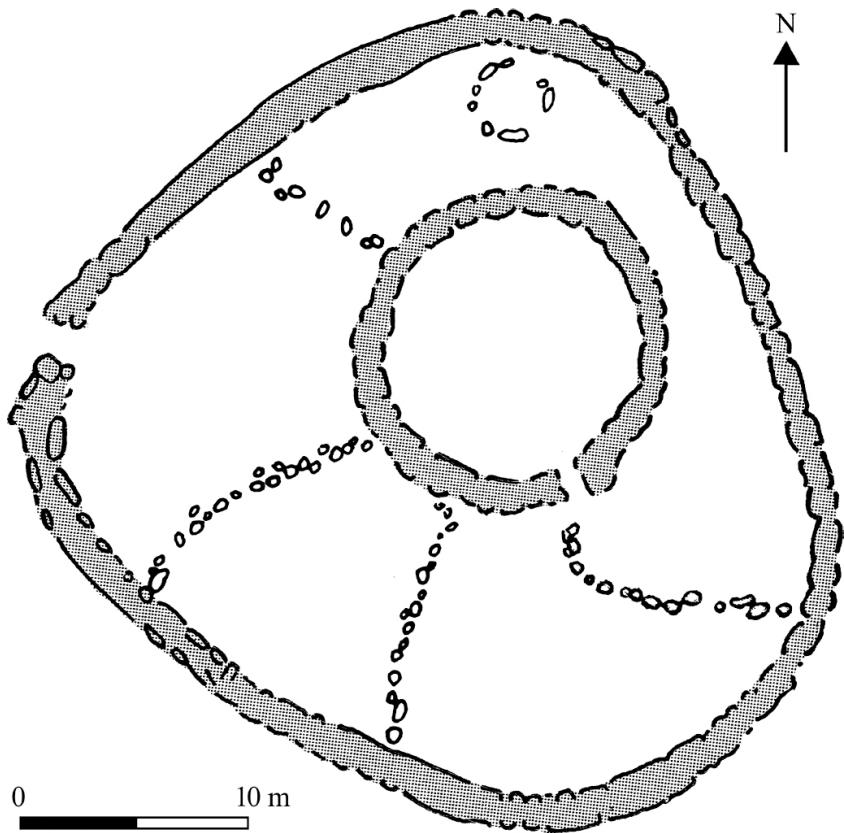


Fig. 7. The Round Pound at Kestor, Devon (after Fox 1955).

Western Armorica

Excavation in Armorica has tended to concentrate on Late La Tène and Gallo-Roman sites and there is relatively little settlement evidence that can be dated to the Earlier Iron Age. However, the aerial photographic evidence from the peninsula and the widespread occurrence of souterrains, which one may assume were associated with settlements, suggest a very densely packed Iron Age landscape (Giot 1990).

The main Iron Age settlement types are earthen-banked enclosures, sometimes with external ditches, large enough to have protected a single or extended family grouping. Curvilinear enclosures, comparable in size and form to those of south-west England and Wales, are common (Fig. 8), particularly in western

areas (Wheeler 1938; Cunliffe 1990; Maguer 1996, 107), but rectilinear forms also develop, resembling types found in west central Europe.

The dating of these different forms is far from clear but they certainly co-existed towards the end of the first millennium BC. On current evidence, however, rectilinear forms cannot be dated earlier than the fourth century BC, while the sites which have provided earlier dates are curvilinear, or feature circular elements in construction. For example, the three oval enclosures excavated so far – Kersigneau in Finistère (Giot and Morzadec 1989; 1991) and Kerlande and Talhouët in Morbihan (Lecornec 1973; Tanguy 1988) – have all provided Early Iron Age dating evidence. Significantly, in terms of comparison with south-west England, all three sites are located on moorland and are of dry-stone construction. The various aerial surveys reveal a range of curvilinear enclosure types that have their closest parallels in south-west England, but which remain totally unexamined (Langouët and Daire 1990; Arbousse-Bastide 1993; Maguer 1996; Leroux *et al.* 1999)

Sub-rectangular forms appear to be the commonest type of house construction, but it must be kept in mind that the vast majority of house forms known in Armorica date to the Late La Tène or Gallo-Roman periods (cf. Menez *et al.* 1990). There is some evidence to suggest that we might expect at least some earlier examples to be round: the only securely dated Late Bronze Age settlement, La Grosse-Roche, Saint-Jacut-de-la-Mer, Côtes d'Armor (Briard and Nicolardot 1985), is a stone-built hut circle; timber roundhouses comparable to British forms are known at the Early Iron Age site of Mez-Notariou on the Ile de Ouessant (Le Bihan and Villard 2001); and a small circular stone building thought to date to the earlier part of the Iron Age was examined in the interior of the camp of Kervedan, Ile de Groix (Thriepland 1943; Wheeler and Richardson 1957; Menez *et al.* 1990, fig. 2). Another stone roundhouse dating to Early or Middle La Tène, featuring massively built walls up to 1.5 m thick surviving to 1 m in height, was excavated at Talhouët, Morbihan (Tanguy 1988).

Significantly, circular house forms and curvilinear enclosures appear to be more common in western Armorica and areas facing the ocean throughout the Iron Age, perhaps demonstrating, as

Duval (1990, 282) has stated, at least a partial adhesion by western Armorican communities to '*un monde celtique atlantique*.'

Univallate enclosures and circular house forms aside, settlement parallels between Armorica and south-west England are perhaps best known from the restricted distributions of promontory forts and souterrains on either side of the Channel (Cunliffe 1991, fig. 9.2). The possible significance of promontory forts to Atlantic Early Iron Age communities has already been discussed. Like promontory forts, the occurrence of souterrains in Atlantic areas may also indicate continuities in social behaviour and potentially belief systems amongst coastal communities.

Although souterrains are found elsewhere in the northern Atlantic zone, evidence for their use in the Early Iron Age can only be demonstrated in Armorica and south-west England. In Armorica the use of souterrains spans the Late Hallstatt period to the end of Middle La Tène from c. 600–100 BC (Giot 1995, 269). In Cornwall, the three excavated examples – Halligye (Startin 1982; Cooke 1993), Carn Euny (Borlase 1868; Christie 1978), and Porthmeor (Hirst 1936) – all indicate beginnings in the fifth century BC, but in contrast to the Armorican examples continued in use well into the first millennium AD. There are also structural differences between the souterrains in the two peninsulas (Fig. 9). In Cornwall, examples are usually, although not exclusively, excavated trenches lined with dry-stone walling, roofed with either stone lintels or timber (Clark 1961; Maclean 1992; Cooke 1993). In contrast, souterrains in Armorica are simply tunnels and chambers cut directly into the subsoil (Giot 1990; 1995, 286–94).

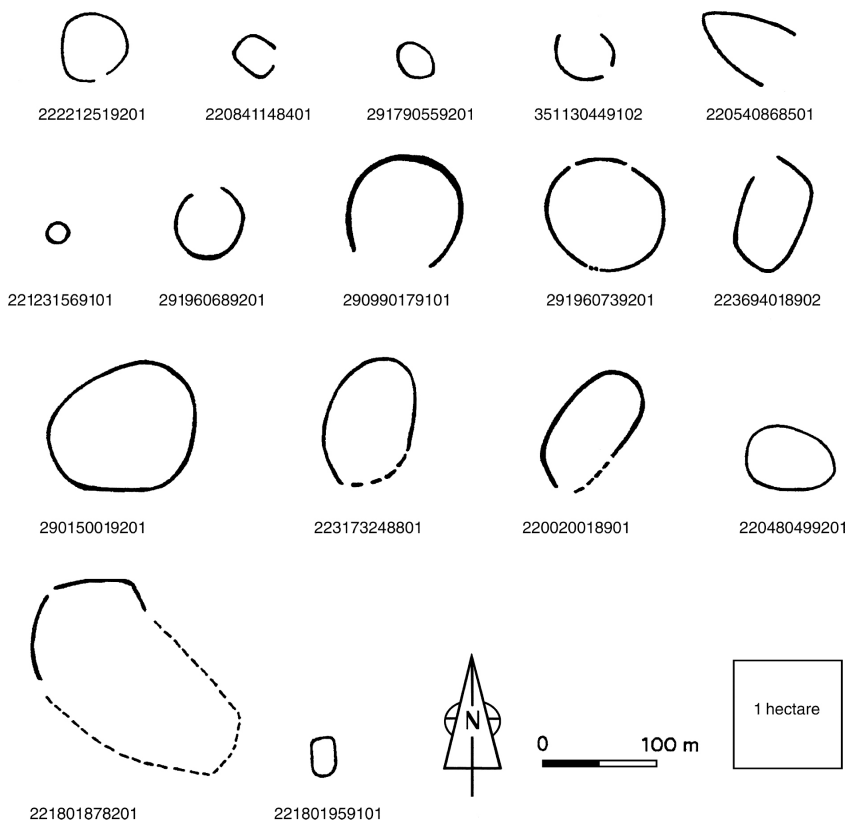


Fig. 8. Curvilinear enclosures from Haute Bretagne (after Arbousse-Bastide 1993).

The most important aspect of souterrains is their close association with domestic settlements. For this reason, a storage use seems most likely, possibly linked, given their subterranean nature, to ‘a belief in the power of chthonic deities to preserve and protect stored commodities’ (Cunliffe 1997, 156). The other main Iron Age methods of storage – four-post granaries and large pits – are rare in the Atlantic west (Champion 1979, 354; Gent 1983, 251). Four-posters are absent from Atlantic Scotland and Ireland, and not well known in other Atlantic areas until the last few centuries BC. Significantly, four-post structures are found in Wales, perhaps offering an explanation for the lack of souterrains in this area. The dating of Armorican souterrains is of considerable interest as they appear to go out of use in the second century BC, around the same

time as four-post granaries and pits interpreted as grain silos begin to be used (Le Bihan *et al.* 1990; Menez 1994; 1996).

Despite the dating and structural differences throughout the Atlantic zone, the use of souterrains represents a comparable way of storing food that contrasts with areas further inland and, in this respect, suggests the existence of shared modes of behaviour and practice between Atlantic communities. The existence of shared traditions are more easily explained if one accepts that souterrains had attached ritual implications and significance to the communities using them and may therefore have been part of a wider spread system of symbolic belief prevalent throughout Atlantic areas.

The lack of clear settlement evidence focuses discussions of the Earlier Iron Age in Armorica on the material culture, recovered mainly from burial contexts, particularly the decorated ceramics and metalwork (Schwappach 1969; Giot 1971; Cunliffe 1990; 2000; Milcent 1993; Giot *et al.* 1995).

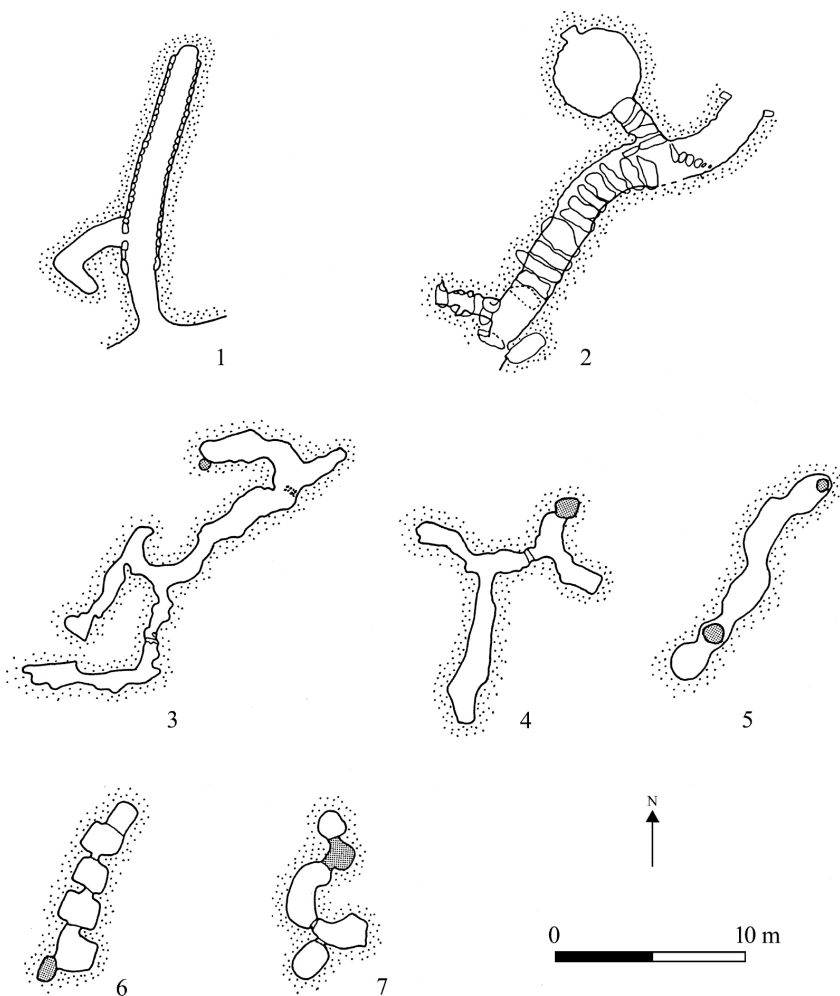


Fig. 9. Plans of Armorican and Cornish souterrains: 1. Boleigh, Cornwall; 2. Carn Euny, Cornwall; 3. La Motte à Sizun, Finistère; 4. Kervéo en Plomelin, Finistère; 5. Pendreff-en-Communa, Finistère; 6. Stang-Vihan en Concarneau, Finistère; 7. Lamphily-en-Concarneau, Finistère (after Christie 1978; Pearce 1982; Giot 1995).

Cultural contacts between Armorica and south-west England

Contacts between south-west England and Armorica are clearest in terms of the similarities in ceramic developments on either side of the Channel. Some of the pottery produced in south-western England in the fifth to fourth centuries BC was stamped in a manner

reminiscent of Armorican stamped wares dating from the fifth to second centuries BC. Similarly the decorated wares occurring from the later fifth century BC in Armorica can be compared with decorated ceramics forms in south-western England dating from the start of the fourth century BC (Déchelette 1914, 1467–9).

Despite the similarities in decoration, the stylistic characteristics of the vessels from each region suggest that there were few direct imports and that forms were produced locally. For example, the stamped sherd from Porthmeor (Hirst 1936, fig. 6, VII, 1) and examples from Trevelgue and Halligye (both unpublished) in Cornwall have all previously been considered as French imports (Todd 1987, 180). However, although these sherds can be closely paralleled with forms in Finistère and Côtes d'Armor, closer inspection of the fabrics indicates that they were produced locally (B. Cunliffe pers. comm.). Two sherds from Carn Euny, however, have been tentatively identified as imports (Christie 1978, fig. 53, nos 4 and 5; Cunliffe and De Jersey 1997, 4). The evidence for British ceramics exported to Armorica is even more sparse and currently consists of a single sherd of South-Western Decorated ware made in Devon, found at the promontory site of Le Yaudet in Brittany (Cunliffe and de Jersey 1997, 1).

As with the apparent absence of decorated forms exchanged *within* Atlantic Scotland, the lack of direct imported and exported ceramics between south-western England and Armorica does not negate the existence of contacts between the two peninsulas. The general similarities in ceramic developments imply that each area had an awareness of styles occurring across the Channel and that, although there is little evidence for intense trading activity, some level of cultural contact must have been in existence.

Direct trading exchanges may simply have been focused on other media including, as Cunliffe has suggested, the circulation of high quality metalwork, which in turn stimulated ceramic developments (Cunliffe 1990; Cunliffe and de Jersey 1997, 38–40). Some evidence for the exchange of metalwork forms in the Earlier Iron Age comes from the recovery of a range of imported artefacts, including two Iberian fibulae, and two Italo-Etruscan bronzes alongside a significant Late Bronze Age assemblage, from the rocky promontory at Mount Batten overlooking Plymouth Sound (Cunliffe 1988).

Mount Batten aside, the evidence for the direct exchange of forms is rare.

Close stylistic similarities have, however, been noted between Armorican ceramics and western British and Irish bronzework, dating from the mid fifth century to the third century BC (Wheeler 1943, 216; Fox 1961, 196; Cunliffe 1990, 248–50; 2000, 380–1; Cunliffe and de Jersey 1997, 38–40). The shape of Armorican Early and Middle La Tène bowls with widely outflaring rims (*jattes basses*), their internally-grooved rims (*bords à cannelure interne*), and curvilinear decoration have many aspects in common with Iron Age bronze bowls in western Britain, such as the designs on the Cerrig-y-Drudion ‘hanging bowl’, north Wales (Smith 1926); the Rose Ash bowl, north Devon (Fox 1961); the bowl from Youlton, Cornwall (Smith 1926, 280–1; Fox 1961, 192–3); the Birdlip bowl, Gloucestershire (Staelens 1983); and the similar, although undecorated, bowl from Bulbery, Dorset (Cunliffe 1972). Cunliffe and de Jersey (1997, 39) have also drawn attention to the similarities between the pottery bowl from Hennebont (Côtes d’Armor), which features a recurved animal head looped to the rim of the shoulder (Menez 1986, fig. 65), and the bronze bowl with animal head attachment from Keshcarrigan, Co. Leitrim in Ireland (Jope 1954, fig. 2).

Again, the existence of cultural contacts is not seen through the direct exchange of forms but instead through broad similarities in style and decoration. The fact that this decoration is found on different media – ceramics and bronzework – in each different area may be a reflection of the exchange of a repertoire of symbols (presumably embedded with some meaning), re-contextualised and used on items relevant to the indigenous social milieu. While this kind of interaction certainly does not indicate the existence of a maritime exchange network on the scale of Late Bronze Age trading contacts, it would similarly establish and reconfirm social continuities along an Atlantic maritime axis.

The curvilinear decoration on Armorican ceramics is thought to have been ultimately inspired by the elaborate motifs present on elite metalwork like that found in the Marne region (Schwappach 1969; Giot 1971; Cunliffe 1990). If this is true, what we may be witnessing in the spread of Marnian inspired decorative styles

through Armorica, south-western England, Wales, and Ireland are the remnants of local systems of Atlantic orientated exchanges. The main impetus behind these exchanges may have been the desire of west central European elites to obtain copper and tin from the metal-rich Atlantic coastlands, via Armorica and the Loire (cf. Cunliffe 2000).

Atlantic contacts in the Early Iron Age

Early Iron Age Atlantic assemblages are rather restricted and ultimately utilitarian in nature. There is a view that this cultural poverty is due to the material and cultural peripherality of Atlantic communities. However, we should not confuse the cultural phenomenon of peripherality with geographical isolation (it does not mean Atlantic areas were not in contact with each other). While Atlantic assemblages do not provide evidence of large-scale trading activity, they do not exclude a significant level of contact along the seaboard, and they indicate, more importantly, the existence of shared ways of life. Whether the latter arises from cultural choices or environmental poverty we cannot say at present. Archaeologists have tended to stress the lack of Hallstatt and La Tène objects and used this absence as an example of cultural isolation. The lack of such objects has meant that Atlantic areas could not be tied into sequences in southern Britain or west central Europe and this situation has helped foster views of north-western Atlantic communities as peripheral to mainstream European and British developments.

There is of course no reason – except for the convenience of archaeologists constructing chronologies based on typology – why we should expect to find Hallstatt or La Tène objects in Atlantic areas. If the development of settlement and society in the west is orientated principally on the Atlantic territory, beginning in the Late Bronze Age, the lack of La Tène objects may be entirely irrelevant. Indeed such objects may have held little meaning for Atlantic Iron Age societies. For example, in Atlantic Scotland and Ireland, societies moving towards more monumental forms of dry-stone architecture may not have needed a more elaborate material culture – status may have been measured through other means such as architectural display or ownership of livestock.

Diffusionist theorists such as Crawford (1912; 1936), Fleure and Roberts (1915), Fox (1932), Childe (1935; 1946), Daniel (1941), and Bowen (1969; 1970; 1972) emphasised the role of long-distance links along the 'western seaways' of Atlantic Europe in the spread of culture. While more fanciful ideas including the spread of invaders, cultures and foreign chiefs with 'magical attributes' (Childe 1935, 78) have rightly been discredited, the basic assumption that seaways unite coastal areas, while overland travel is often more difficult (particularly in terms of energy expended), is a basically sound one for the Atlantic coasts.

On the whole, travel by sea requires less energy input when compared to land journeys of a similar length. At sea off Scotland's west coast, a single tide (in c. 6 hours) will carry a boat for 5 or 6 nautical miles along its direction of flow, in open water, at no energy cost to the mariner (J. Barber pers. comm.). In certain straits and around some headlands, it can carry a mariner that distance in an hour. Coast looping – the process of sailing along a coast with favourable wind and tide and laying up on a suitable beach when the tide turns or the wind is unfavourable – is practised by pleasure sailors today, and may have been the nature of prehistoric maritime travel. A typical small boat of the coracle type mentioned in Early Historic sources would easily make 5 knots and could therefore travel around 35 miles with the assistance of a single tide, at little or no energy cost to the sailors, even when carrying loads of several tons.

Thus, the nostrum holds for the north-western Atlantic that travel along the coasts and between its islands has always been easier than travel eastwards, over the high land that borders it. In this we see the genesis of the similarities along the north-western Atlantic seaboard and its relative, but by no means absolute, isolation from trends emanating from the Continent. Inevitably under such conditions, communities remain relatively isolated from wider development and in many cases are more likely to adhere to their own trends.

In the absence of exotic trade goods we need to look at more subtle expressions of contacts between communities. Two explanations can be proposed to account for the lack of material evidence for contacts in the Early Iron Age (Barber and Henderson

forthcoming). The first envisages that contact continues throughout the apparent hiatus, but is invisible, in the absence of the 'tracer' effect of exotic trade goods, with cultural exchange presumably being through the communication of fundamental beliefs, technology or ideas. This is, necessarily, the idea underlying the definition of Atlantic contacts in the Early Iron Age. The second explanation is that there is a real hiatus in contacts between communities.

It is possible, but unlikely, that contacts between communities could be restricted to supplying each other's needs for exotic goods to the exclusion of all other exchange (economic and cultural). It is perhaps more likely that communities would embark upon some level of contact and discover amongst each other's available resources products that could be exchanged.

The exchange goods of the Early Iron Age could have been any of the traditional archaeologically invisible commodities including products such as livestock, grain and animal hides. Analysis of the proportions of animals such as cattle and red deer on Earlier Iron Age sites may be important in this sense – it has recently been reported, for example, that there is a sophisticated and well-developed dairying economy represented at Cladh Hallan on South Uist (Parker Pearson *et al.* 2000, 27–9).

As well as the trading of dairy products, there may have been some level of livestock exchange between Atlantic areas, particularly between the islands. It has been suggested, for example, that the island of Iona is too small to maintain a significant deer or cattle population, making it a possibility that animals were imported from nearby Mull (Gilmour and Cook 1998, 334). The creation of a livestock surplus may have been important for Atlantic exchanges, but if this were true, it would be difficult to prove by archaeological methods.

Exotic goods can convey social meanings but they are usually supplementary to the trade. In other words, the need for exotics is usually supplied on the back of existing trade; such trade does not necessarily arise from the need for exotics. It would be rather restrictive to say that power or social meaning can only be articulated through the use of exotics. The connection between symbols of power and trade is not a simple or necessary one. If

other symbols of power can be supplied, the semiotic of power can use them.

Thus, as has been argued for Atlantic Scotland, substantial roundhouses can perhaps be viewed as symbols of power whose existence replaced the use of the exotic trade goods of the Late Bronze Age (Armit 1990c). The appearance of roundhouse forms with thicker, more substantial walls in the Early Iron Age may mark the beginnings of this new form of social dominance through architectural display. Social meaning and power may similarly have been communicated between Armorica and south-west England through the appearance of defended settlements and the practices carried out at places of specialised function such as promontory forts and souterrains.

Equally, the use of distinctive decorated ceramics linked western Armorican and south-western English communities together, and distinguished them from their easterly neighbours. In a similar way the use of decorated ceramics within Atlantic Scotland distinguishes those communities from the rest of the mainland. As we have seen, the similarities in the decoration used on ceramics both within Atlantic Scotland and between south-west England and Armorica occurred with little or no evidence for the exchange of forms between areas. In other words, ceramics were produced according to local traditions but within an awareness of what was occurring elsewhere. The ceramics thus mirror the situation already observed among the structures of the north-west Atlantic zone. Large-scale homogeneity dissolving at smaller scales into regional or even local heterogeneity can be considered a leitmotif for the period and the Atlantic province as a whole.

Conclusion

The Atlantic Early Iron Age was perhaps a more inward looking time when contacts were less frequent and less wide-ranging than during the Late Bronze Age. Nonetheless, contacts along the seaboard would have prevailed, maintaining cultural similarities amongst communities. Whether the construction of substantial circular settlement forms at this time reflects a distinctively Atlantic tradition, with accompanying widespread social meaning, is more difficult to say. Apparent similarities in settlement forms and ways

of life were probably created largely unconsciously (although as the result of maritime contacts) and were not, therefore, intentional expressions of anything approaching a cohesive Atlantic identity. Similarities and continuities in Atlantic areas were created at one level through relatively easy sea-borne communication while, paradoxically, the fragmented nature of the coastlands and islands, along with their location on the edge of the known world, ensured the maintenance of strong regional identities.

In this sense, despite local and regional differences, Atlantic communities have more in common with each other than with those found further to the east. Whilst it may be true that Atlantic communities were largely conservative during the Early Iron Age, it does not immediately follow that this conservatism was due to the isolation of coastal regions from one another – contacts within a seaward looking zone may have led to longer-term continuities.

Iron Age studies are well past the point of expecting cultural phenomena to add up to a coherent whole. There is no evidence for contact in the Atlantic Early Iron Age in the traditional sense of artefacts being exchanged and deposited from area to area. Yet standing back from the detail, one can recognise broad similarities in settlement forms and assemblages which, while they are by no means identical, indicate that Atlantic communities were developing according to their own strong indigenous traditions but equally within an awareness of what was happening elsewhere along the Atlantic coasts. This awareness can only be explained through the maintenance of some level of contact. The challenge now lies in trying to define more subtle evidence of cultural contacts and similarities. For the Early Iron Age in the north-western Atlantic, this quite simply requires more excavation of settlement forms potentially of this period and the study of Atlantic assemblages on their own merits rather than by comparison with what is found further east.

Bibliography

- Alcock, L. 1960. Castell Odo: An embanked settlement on Mynydd Ystum, near Aberdaron, Caernarvonshire, *Archaeologia Cambrensis* 109, 78–135.
- Arbousse-Bastide, T. 1993. Une nouvelle approche des enclos fossoyés du nord de la Haute-Bretagne, *Dossiers du Centre Régional d'Archéologie*

d'Alet 21, 67–100.

- Armit, I. 1990a. Epilogue: the Scottish Atlantic Iron Age, in Armit 1990d, 194–210.
- Armit, I. 1990b. Brochs and beyond in the Western Isles, in Armit 1990d, 41–70.
- Armit, I. 1990c. Monumentality and elaboration: a case study in the Western Isles, *Scottish Archaeological Review* 7, 84–85.
- Armit, I. (ed.) 1990d. *Beyond the Brochs: Changing Perspectives on the Atlantic Scottish Iron Age*. Edinburgh: Edinburgh University Press.
- Armit, I. 1992. *The Later Prehistory of the Western Isles of Scotland*. Oxford: British Archaeological Reports British Series 221.
- Armit, I. 1996. *The Archaeology of Skye and the Western Isles*. Edinburgh: Edinburgh University Press.
- Armit, I. 1997. Architecture and the household: a response to Sharples and Parker Pearson, in Gwilt and Haselgrove 1997, 266–269.
- Ballin Smith, B. (ed.) 1994. *Howe: Four Millennia of Orkney Prehistory*. Edinburgh: Society of Antiquaries of Scotland Monograph 9.
- Barber, J.W. and Henderson, J.C. forthcoming. The later prehistoric dry-stone forts of Scotland, in C. Cotter, *The Western Stone Forts Project*. Dublin: Discovery Programme Monographs.
- Barry, T.B. 1981. Archaeological excavations at Dunbeg promontory fort, Co. Kerry, *Proceedings of the Royal Irish Academy* 81C, 295–329.
- Bell, M. 1984. Environmental archaeology in South West England, in H.C.M. Keeley (ed.), *Environmental Archaeology: A Regional Review*, 42–54. London: Department of the Environment.
- Bender, B. 1986. *The Archaeology of Brittany, Normandy and the Channel Islands: an Introduction and Guide*. London: Faber and Faber.
- Borlase, W.C. 1868. Excavations in subterranean chambers at Chapel Euny, Sancreed, Cornwall, *Proceedings of the Society of Antiquaries* 5, 161–170.
- Bowen, E.G. 1969. *Saints, Seaways and Settlements in the Celtic Lands*. Cardiff: University of Wales Press.
- Bowen, E.G. 1970. Britain and the British Seas, in D. Moore (ed.), *The Irish Sea Province in Archaeology and Early History*, 13–28. Cardiff: Cambrian Archaeological Association.
- Bowen, E.G. 1972. *Britain and the Western Seaways*. London: Thames and Hudson.
- Bradley, R. 1997. *Rock Art and the Prehistory of Atlantic Europe: Signing the Land*. London: Routledge.
- Briard, J. and Nicolardot, J.-P. 1985. Un habitat de hauteur côtier de l'Âge du Bronze en Bretagne, in Spratt and Burgess 1985, 365–383.
- Burgess, C. 1974. The Bronze Age, in C. Renfrew (ed.), *British Prehistory: a*

- New Outline*, 165–232. London: Duckworth.
- Burgess, C. 1985. Population, climate and upland settlement, in Spratt and Burgess 1985, 195–230.
- Caseldine, C.J. and Hatton, J.M. 1994. Into the Mists? Thoughts on the Prehistoric and Historic Environmental History of Dartmoor, *Proceedings of the Devon Archaeological Society* 52, 21–47.
- Caulfield, S. 1981. Celtic Problems in the Irish Iron Age, in D. Ó Corráin (ed.), *Irish Antiquity. Essays and Studies Presented to Professor M. J. O'Kelly*, 205–215. Cork: Tower Books.
- Champion, T.C. 1979. The Iron Age in southern Britain and Ireland, in J.V.S. Megaw and D.D.A. Simpson (eds), *Introduction to British Prehistory from the arrival of Homo sapiens to the Claudian Invasion*, 344–445. Leicester: Leicester University Press.
- Childe, V.G. 1935. *The Prehistory of Scotland*. London: K. Paul, Trench, Trubner and Co. Ltd.
- Childe, V.G. 1946. *Scotland Before the Scots*. London: Methuen.
- Childe, V.G. and Thorneycroft, W. 1938. The Vitified Fort at Rahoy, Morven, Argyll, *Proceedings of the Society of Antiquaries of Scotland* 72, 23–43.
- Christie, P.M.L. 1978. Cornish souterrains in the light of recent research, *Bulletin of the Institute of Archaeology London* 16, 187–213.
- Clark, E. 1961. *Cornish Fogous*. London: Methuen.
- Coles, J.M. 1960. Scottish Late Bronze Age metalwork: typology, distributions and chronology, *Proceedings of the Society of Antiquaries of Scotland* 93, 16–134.
- Cooke, I.M. 1993. *Mother and Sun, the Cornish Fogou*. Penzance: Men-An-Tol Studio Publications.
- Cotter, C. 1993. Western Stone Fort Project. Interim Report, *Discovery Programme Reports* 1, 1–19.
- Cotter, C. 1995. Western Stone Fort Project. Interim Report, *Discovery Programme Reports* 2, 1–11.
- Cotter, C. 1996. Western Stone Fort Project. Interim Report, *Discovery Programme Reports* 4, 1–14.
- Cotter, C. 2000. The chronology and affinities of the stone forts along the Atlantic coast of Ireland, in J.C. Henderson (ed.), *The Prehistory and Early History of Atlantic Europe*, 171–180. Oxford: British Archaeological Reports International Series 891.
- Crawford, O.G.S. 1912. The distribution of Early Bronze Age settlements in Britain, *Geographical Journal* 40, 184–203.
- Crawford, O.G.S. 1936. Western Seaways, in L.H.D. Buxton (ed.), *Custom is King: Essays Presented to R.R. Marett*, 181–200. London: Hutchinson.

- Church, M. and Gilmour, S. 1999. Uig Landscape Survey, Gob Eirer, *Discovery and Excavation in Scotland*, 115.
- Cunliffe, B. 1972. The Late Iron Age metalwork from Bulbery, Dorset, *Antiquaries Journal* 52, 293–308.
- Cunliffe, B. 1988. *Mount Batten, Plymouth. A Prehistoric and Roman Port*. Oxford: Oxford University Committee for Archaeology Monograph 26.
- Cunliffe, B. 1990. Social and economic contacts between western France and Britain in the Early and Middle La Tène period, in L'Helgouach 1990, 245–251.
- Cunliffe, B. 1991. *Iron Age Communities in Britain* (3rd edn). London: Routledge.
- Cunliffe, B. 1997. *The Ancient Celts*. Oxford: Oxford University Press.
- Cunliffe, B. 2000. Brittany and the Atlantic Rim in the Later First Millennium BC, *Oxford Journal of Archaeology* 19, 267–286.
- Cunliffe, B. 2001. *Facing the Ocean: The Atlantic and its Peoples 8000 BC– AD 1500*. Oxford: Oxford University Press.
- Cunliffe, B. and de Jersey, P. 1997. *Armorica and Britain. Cross-Channel Relationships in the Late First Millennium BC*. Oxford: Studies in Celtic Coinage No. 3/Oxford University Committee for Archaeology Monograph 45.
- Daniel, G.E. 1941. The dual nature of the Megalithic colonisation of prehistoric Europe, *Proceedings of the Prehistoric Society* 7, 1–49.
- Davies, J.L. 1995. The early Celts in Wales, in M. Green (ed.), *The Celtic World*, 671–702. London: Routledge.
- Déchelette, J. 1914. *Manuel d'archéologie préhistorique, celtique et gallo-romaine, II. Archéologie celtique ou protohistorique. Troisième partie: second Age du Fer ou époque de la Tène*. Paris: Picard.
- Dockrill, S.J. 1998. Northern Exposure: Phase 1 of the Old Scatness Excavations, 1995–8, in R.A. Nicholson and S.J. Dockrill (eds.), *Old Scatness Broch, Shetland: Retrospect and Prospect*, 59–80. Bradford: Bradford Archaeological Sciences Research 5/NABO Monograph 2.
- Dudley, D. 1956. An excavation at Bodrifty, Mulfra, near Penzance, *Archaeological Journal* 113, 1–32.
- Duval, A. 1990. L'Armorique vue du “continent”, in L'Helgouach 1990, 279–286.
- Duval, A., Le Bihan, J.-P. and Menez Y. (eds) 1990. *Les Gaulois d'Armorique (Actes du XIIIe colloque AFEAF, Quimper 1988)*. Rennes: Revue Archéologique de l'Ouest supplément 3.
- Earwood, C. 1993. *Domestic Wooden Artefacts in Britain and Ireland from Neolithic to Viking Times*. Exeter: University of Exeter Press.
- Fairhurst, H. 1971. Kilphedir and hut circle sites in Northern Scotland,

Scottish Archaeological Forum 3, 1–10.

- Fairhurst, H. and Taylor, D.B. 1974. A hut circle settlement at Kilphedir, Sutherland, *Proceedings of the Society of Antiquaries of Scotland* 103, 65–99.
- Fitzpatrick, A.P. 1994. Outside in: the structure of an Early Iron Age house at Dunston Park, Thatcham, Berkshire, in A.P. Fitzpatrick and E.L. Morris (eds), *The Iron Age in Wessex: Recent Work*, 68–72. Salisbury: Trust for Wessex Archaeology.
- Fleure H.J. and Roberts, J.E. 1915. Archaeological problems of the west coast of Britain, *Archaeologia Cambrensis* 70, 405–420.
- Fox, A. 1955. Excavations at Kestor, an early Iron Age settlement near Chagford, Devon, *Transactions of the Devonshire Association* 86, 21–62.
- Fox, A. 1961. South western hillforts, in S.S. Frere (ed.), *Problems of the Iron Age in Southern Britain*. London: Institute of Archaeology, University of London.
- Fox, C.F. 1932. *The Personality of Britain*. Cardiff: National Museum of Wales.
- Gent, H. 1983. Centralized storage in later prehistoric Britain, *Proceedings of the Prehistoric Society* 49, 243–267.
- Gilmour, S. 1994. *Iron Age Dry-stone Structures in Argyll*. Unpublished M.A. dissertation, University of Edinburgh.
- Gilmour, S. and Cook, M. 1998. Excavations at Dun Vulcan: a reinterpretation of the reappraised Iron Age, *Antiquity* 72, 327–337.
- Giot, P.R. 1971. Ombres et lumières sur la chronologie de la céramique Armoricaine de l'Âge du Fer, *Annales de Bretagne* 78, 73–92.
- Giot, P.R. 1990. Souterrains et habitats à l'Âge du Fer en Armorique, in Duval *et al.* 1990, 53–61.
- Giot, P.R. 1995. L'âge du Fer, in P.R. Giot, J. Briard and L. Pape (eds), *Protohistoire de la Bretagne* (2nd edn), 203–366. Rennes: Editions Ouest France.
- Giot, P.R. and Morzadec, H. 1989. Un enclos ceinturé du second âge du fer: Kersigneau Saint-Jean en Plouhinec (Finistère). La partie occidentale, *Bulletin de la Société Archéologique du Finistère* 118, 85–113.
- Giot, P.R. and Morzadec, H. 1991. Un enclos ceinturé du second âge du fer: Kersigneau Saint-Jean en Plouhinec (Finistère). La partie orientale, *Bulletin de la Société Archéologique du Finistère* 120, 93–104.
- Gordon, A.S.R. 1940. The excavation of Gunard's Head, an Iron Age cliff castle in western Cornwall, *Archaeological Journal* 97, 96–111.
- Gwilt, A. and Haselgrove, C. (eds) 1997. *Reconstructing Iron Age Societies*. Oxford: Oxbow Monograph 71
- Hamilton, J.R.C. 1956. *Excavations at Jarlshof*. Edinburgh: Ministry of

Works Archaeological Report 1.

- Harding, D.W. 1972. Round and rectangular: Iron Age houses, British and foreign, in C. and S. Hawkes (eds), *Greeks, Celts and Romans*, 43–60. London: Dent.
- Harding, D.W. 1984. The function and classification of Brochs and Duns, in R. Miket and C. Burgess (eds), *Between and Beyond the Walls, Essays on the Prehistory and History of Northern Britain in Honour of George Jobey*, 206–220. Edinburgh: John Donald.
- Harding, D.W. 2005. The Iron Age in Atlantic Scotland and the Western Seaways, in W. Gillies and D.W. Harding (eds), *Celtic Connections, Vol. 2 (Papers from the 10th International Congress of Celtic Studies, Edinburgh 1995)*, 166–180. Edinburgh: Department of Archaeology Monograph 2.
- Hedges, J.W. 1987. *Bu, Gurness and the Brochs of Orkney*, Vols. 1–3. Oxford: British Archaeological Reports British Series 163–165.
- Hedges, J.W. and Bell, B. 1980. That tower of Scottish prehistory – the broch, *Antiquity* 54, 87–94.
- Henderson, J.C. 2000. Shared Traditions? The Dry-stone Settlement Records of Atlantic Scotland and Ireland 700 BC–AD 200, in J.C. Henderson (ed.), *The Prehistory and Early History of Atlantic Europe*, 117–154. Oxford: British Archaeological Reports International Series 891.
- Herring, P. 1994. The cliff castles and hillforts of West Penwith in the light of recent work at Maen Castle and Treryn Dinas, *Cornish Archaeology* 33, 40–56.
- Hingley, R. 1990. Public and private space: domestic organisation and gender relations amongst Iron Age and Romano-British households, in R. Samson (ed.), *The Social Archaeology of Houses*, 123–162. Edinburgh: Edinburgh University Press.
- Hirst, F.C. 1936. Excavations at Porthmeor, Cornwall, *Journal of the Royal Institution of Cornwall* 24, 1–81.
- Hodson, F.R. 1964. Cultural groupings within the pre-Roman Iron Age, *Proceedings of the Prehistoric Society* 30, 99–110.
- Hogg, A.H.A. 1960. Garn Boduan and Tre'r Ceiri, Excavations at two Caernarvonshire hillforts, *Archaeological Journal* 117, 1–39.
- Hogg, A.H.A. 1972. Hillforts in the coastal area of Wales, in Thomas 1972b, 11–23.
- Johnson, N. and Rose, P. 1982. Defended settlement in Cornwall – an illustrated discussion, in D. Miles (ed.), *The Romano-British Countryside*, 151–209. Oxford: British Archaeological Reports British Series 103.
- Jope, E.M. 1954. The Keshcarrigan bowl and a bronze mirror-handle from Ballymoney, *Ulster Journal of Archaeology* 17, 92–96.
- Kelly, E.P. 1974. Aughinish Island, in T.G. Delaney (ed.), *Excavations 1974*,

- Kelly, R.S. 1988. Two late prehistoric circular enclosures near Harlech, Gwynedd, *Proceedings of the Prehistoric Society* 54, 101–151.
- Kelly, R.S. 1991. Recent research on the hut group settlements of north-west Wales, in B.C. Burnham and J.L. Davies (eds), *Conquest, Co-existence and Change*, 102–111. Lampeter: St David's University College.
- Kristiansen, K. 1998. *Europe before History*. Cambridge: Cambridge University Press.
- Lamb, R.G. 1980. *Iron-Age Promontory Forts in the Northern Isles*. Oxford: British Archaeological Reports British Series 79.
- Langouët, L. and Daire, M.-Y. 1990. Les enclos protohistoriques et gallo-romains du nord de la Haute-Bretagne, *Dossiers du Centre de Recherche d'Archéologie Armoricaïne* 18, 79–111.
- Le Bihan, J.P., Bardel, J.P., Menez, Y. and Tanguy, D. 1990. Les établissements ruraux du second âge du fer en Armorique, in Duval *et al.* 1990, 97–113.
- Le Bihan, J.P. and Villard, J.F. 2001. *Le site archéologique de Mez-Notariou et le village du premier Age du Fer*. Rennes: Archéologie d'une île à la pointe de l'Europe: Ouessant Vol. 1.
- Lecornec, J. 1973. Le site à enclos de Kerlande à Brandivy (Morbihan), *Annales de Bretagne* 80, 61–70.
- Leroux, G., Gautier, M., Meuret, J.-C. and Naas, P. 1999. *Enclos Gaulois et Gallo-Romains en Armorique. De la prospection aérienne à la fouille entre Blavet et Mayenne*. Rennes: Documents archéologiques de l'Ouest.
- L'Helgouach, J. (ed.) 1990. *La Bretagne et L'Europe Préhistoriques*. Rennes: Revue Archéologique de l'Ouest Supplément no. 2.
- Limbert, D. 1996. Irish ringforts: a review of their origins, *Archaeological Journal* 153, 243–289.
- Lowe, C. 1998. *Coastal Erosion and the Archaeological Assessment of an Eroding Shoreline at St Boniface Church, Papa Westray, Orkney*. Stroud: Sutton.
- Lynn, C.J. 1992. The Iron Age mound in Navan Fort: a physical realisation of Celtic religious beliefs? *Emania* 10, 33–57.
- Mackie, E.W. 1995. The early Celts in Scotland, in M.J. Green (ed.), *The Celtic World*, 654–670. London: Routledge.
- Mackie, E.W. 1997. Dun Mor Vul revisited: fact and theory in the reappraisal of the Scottish Atlantic Iron Age, in G. Ritchie (ed.), *The Archaeology of Argyll*, 141–180. Edinburgh: Edinburgh University Press.
- Mackie, E.W. 1998. Continuity over three thousand years of northern prehistory: the 'Tel' at Howe, Orkney, *Antiquaries Journal* 78, 1–42.
- Maclean, R. 1992. The Fogou: an investigation of function, *Cornish*

Archaeology 31, 41–64.

- Maguer, P. 1996. Les enceintes fortifiées de l'âge du fer dans le Finistère, *Revue Archéologique de l'Ouest Supplément* 13, 103–121.
- Marshall, D.N. 1964. Report on Excavations at Little Dunagoil, *Transactions of the Buteshire Natural History Society* 16, 30–69.
- Maxwell, G. 1969. Duns and Forts – a note on some Iron Age monuments of the Atlantic province, *Scottish Archaeological Forum* 1, 41–46.
- McIntyre, A. 1999. Survey and excavation at Kilearnan Hill, Sutherland, 1982–3, *Proceedings of the Prehistoric Society* 128, 167–202.
- Menez, Y. 1986. *Hennebont: Rapport de Fouilles, juillet 1986*. Rennes: Service Régional de l'Archéologie de Bretagne.
- Menez, Y. 1994. Les enclos de type “ferme indigène” en Bretagne: quelques réflexions issues de treize ans de fouilles, in O. Buchsenschutz and P. Ménériel (eds), *Les Installations Agricoles de l'âge de fer en Ile-de-France*, 255–276. Paris: Etudes d'Histoire et d'Archéologie 4.
- Menez, Y. 1996. *Une ferme de l'Armorique gaulois: Le Boisanne à Plouersur-Rance (Côtes-d'Armor)*. Paris: Documents d'Archéologie Française 58.
- Menez, Y., Hyvert, J., Langouët, L., Le Bihan, J.P. and Tanguy, D. 1990. Les bâtiments du second Age du Fer en Armorique, in Duval *et al.* 1990, 121–137.
- Mercer, R.J. 1980. *Archaeological Field Survey in Northern Scotland, Vol. I. 1976–79*. Edinburgh: University of Edinburgh Department of Archaeology Occasional Paper 4.
- Mercer, R.J. 1981. *Archaeological Field Survey in Northern Scotland, Vol. II. 1980–1*. Edinburgh: University of Edinburgh Department of Archaeology Occasional Paper 7.
- Mercer, R.J. 1985. *Archaeological Field Survey in Northern Scotland, Vol. III. 1982–3*. Edinburgh: University of Edinburgh Department of Archaeology Occasional Paper 11.
- Mercer, R.J. 1996. The excavation of a succession of prehistoric roundhouses at Cnoc Stanger, Reay, Caithness, Highland, 1981–2, *Proceedings of the Society of Antiquaries of Scotland* 126, 157–190.
- Milcent, P.-Y. 1993. L'Age du fer en Armorique à travers les ensembles funéraires (IXe–IIIe siècles avant J.C.), *Antiquités Nationales* 25, 17–50.
- Nieke, M.R. 1984. *Settlement Patterns in the Atlantic Province of Scotland in the First Millennium AD: A Study of Argyll*. Unpublished Ph.D thesis, University of Glasgow.
- Nieke, M.R. 1990. Fortifications in Argyll: retrospect and future prospect, in Armit 1990d, 131–142.
- O'Donovan, J. 1839. *Ordnance Survey Letters, County Galway*.
- Oswald, A. 1997. A doorway on the past: Practical and mystic concerns in

the orientation of roundhouse doorways, in Gwilt and Haselgrove 1997, 87–95.

- Parker Pearson, M. 1996. Food, fertility and front doors in the first millennium BC, in T.C. Champion and J.R. Collis (eds), *The Iron Age in Britain and Ireland: Recent Trends*, 117–132. Sheffield: J.R. Collis Publications.
- Parker Pearson, M. and Richards, C. (eds) 1994. *Architecture and Order: Approaches to Social Space*. London: Routledge.
- Parker Pearson, M. and Sharples, N. 1999. *Between Land and Sea: Excavations at Dun Vulan, South Uist*. Sheffield: Sheffield Academic Press.
- Parker Pearson, M., Marshall, P., Mulville, J. and Smith, H. 2000. *Cladh Hallan: Excavation of a Late Bronze Age to Early Iron Age Settlement, August–September 2000. Interim report*. Sheffield: Department of Prehistory and Archaeology, University of Sheffield.
- Parker Pearson, M., Sharples, N. and Mulville, J. 1996. Brochs and Iron Age society: a reappraisal, *Antiquity* 70, 57–67.
- Pearce, S.M. 1981. *The Archaeology of South West Britain*. London: Collins.
- Quinnell, H. 1986. Cornwall during the Iron Age and the Roman period, *Cornish Archaeology* 25, 111–135.
- Quinnell, H. 1994. Becoming marginal? Dartmoor in later prehistory, *Proceedings of the Devon Archaeological Society* 52, 75–83.
- Raftery, B. 1984, *La Tène in Ireland: Problems of Origin and Chronology*. Marburg: Vorgeschichtlichen Seminars Marburg.
- Raftery, B. 1994. *Pagan Celtic Ireland*. London: Thames and Hudson.
- RCAHMS (Royal Commission on the Ancient and Historical Monuments of Scotland) 1911. *Report 3 – County of Caithness*. Edinburgh: HMSO.
- RCAHMS. 1971. *Argyll. An Inventory of the Ancient Monuments. 1. Kintyre*. Edinburgh: HMSO.
- RCAHMS. 1975. *Argyll. An Inventory of the Ancient Monuments. 2. Lorn*. Edinburgh: HMSO.
- RCAHMS. 1980. *Argyll. An Inventory of the Ancient Monuments. 3. Mull, Tiree, Coll and Northern Argyll*. Edinburgh: HMSO.
- RCAHMS. 1981. *Argyll. An Inventory of the Ancient Monuments. 4. Iona*. Edinburgh: HMSO.
- RCAHMS. 1984. *Argyll. An Inventory of the Ancient Monuments. 5. Islay, Jura, Colonsay and Oronsay*. Edinburgh: HMSO.
- RCAHMS. 1988. *Argyll. An Inventory of the Ancient Monuments. 6. Mid-Argyll and Cowal*. Edinburgh: HMSO.
- Reid, M.L. 1989. A room with a view: an examination of round-houses, with particular reference to northern Britain, *Oxford Journal of Archaeology* 8, 1–39.

- Rideout, J.S. 1995. Carn Dubh, Moulin, Perthshire: survey and excavation of an archaeological landscape 1987–90, *Proceedings of the Society of Antiquaries of Scotland* 125, 139–196.
- Renfrew, A.C. 1979, *Investigations in Orkney*. London: Society of Antiquaries of London.
- Schwappach, F. 1969. Stempelverzierte Keramik von Armorica, in O.-H. Frey (ed.), *Marburger Beiträge zur Archäologie der Kelten*, 213–287. Bonn: Habelt.
- Sharpe, A. 1992. Treryn Dinas: cliff castles reconsidered, *Cornish Archaeology* 31, 65–68.
- Sharples, N. 1984. Excavations at Pierowall Quarry, Westray, Orkney, *Proceedings of the Society of Antiquaries of Scotland* 114, 75–125.
- Sharples, N. 1998. *Scalloway: a Broch, Late Iron Age Settlement and Medieval Cemetery in Shetland*. Oxford: Oxbow Books.
- Sharples, N. and Parker Pearson, M. 1997. Why were brochs built? Recent studies in the Iron Age of Atlantic Scotland, in Gwilt and Haselgrove 1997, 254–265.
- Silvester, R. J. 1979, The relationship of first millennium settlement to the upland areas of the south west, *Proceedings of the Devon Archaeological Society* 37, 176–191.
- Smith, C.A. 1974. A morphological analysis of late Prehistoric and Romano-British settlements in north-west Wales, *Proceedings of the Prehistoric Society* 40, 157–169.
- Smith, C.A. 1977. Later Prehistoric and Romano-British enclosed homesteads in north west Wales: an interpretation of their morphology, *Archaeologia Cambrensis* 126, 38–52.
- Smith, R.A. 1926. Two Early British Bronze Bowls, *Antiquaries Journal* 6, 276–283.
- Spratt, D. and Burgess, C. (eds) 1985. *Upland Settlement in Britain*. Oxford: British Archaeological Reports British Series 143.
- Staelens, Y.J.E. 1983. The Birdlip cemetery, *Transactions of the Bristol and Gloucestershire Archaeological Society* 100, 19–31.
- Startin, W. 1982. Halligye Fogou: excavations in 1981, *Cornish Archaeology* 21, 185–186.
- Stuiver, M. and Pearson, G.W. 1993. High-precision bidecadal calibration of the radiocarbon time scale, AD 1950–500 BC and 2500–6000 BC, *Radiocarbon* 35, 1.
- Tanguy, D. 1988. L'habitat du Second Age du Fer de Pluvigner (Morbihan), in F. Audouze and O. Büchsenschütz (eds), *Architectures des Ages des Métaux, fouilles récentes*, 71–80. Paris: Dossiers de Protohistoire 2.
- Thomas, C. 1966. The character and origins of Roman Dumnonia, in C.

- Thomas (ed.), *Rural Settlement in Roman Britain*, 74–98. London: Council for British Archaeology Research Report 7.
- Thomas, C. 1972a. Souterrains in the sea province: a note, in Thomas 1972b, 75–78.
- Thomas, C. (ed.) 1972b. *The Iron Age in the Irish Sea Province*. London: Council for British Archaeology Research Report 9.
- Thriepeland, L.M. 1943. Excavations in Brittany, Spring 1939, *Archaeological Journal* 100, 128–149.
- Todd, M. 1987. *The South West to AD 1000*. London: Longman.
- Topping, P.G. 1987. Neutron activation analysis of later prehistoric pottery from the Western Isles of Scotland, *Proceedings of the Prehistoric Society* 52, 105–129.
- Wainwright, G.J. and Smith, K. 1980. The Shaugh Moor project: second report – the enclosure, *Proceedings of the Prehistoric Society* 46, 65–122.
- Wheeler, R.E.M. 1938. Notebooks relating to Wheeler's field survey of the earthworks of Brittany. Oxford: Institute of Archaeology Archive.
- Wheeler, R.E.M. 1943. *Maiden Castle, Dorset*. Oxford: Reports of the Research Committee of the Society of Antiquaries of London 12.
- Wheeler, R.E.M. and Richardson, K.M. 1957. *Hillforts of Northern France*. Oxford: Reports of the Research Committee of the Society of Antiquaries of London 19.
- Wildgoose, M., Burney, C. and Miket, R. 1993. *Coille a'Ghasgain, by Ord Sleat, interim report*. Skye.
- Williams, G. 1988. Recent work on rural settlement in later prehistoric and early historic Dyfed, *Antiquaries Journal* 68, 30–54.
- Williams, G. and Mytum, H. 1998. *Llawhaden, Dyfed. Excavations on a Group of Small Defended Enclosures, 1980–4*. Oxford: British Archaeological Reports British Series 275.

English and Danish Iron Ages – a comparison through houses, burials and hoards

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Introduction – about comparisons

There are no obvious direct connections between England and Denmark in the mid first millennium BC, the period of the Late Bronze to Early Iron Age. Whether we look at the distribution of particular objects, of trade routes, or of settlement forms, our maps show few if any links between the areas. There appears to be no obvious need, or indeed focal point, for a comparison, and the benefit of such an exercise might appear slim.

In response, as we do desire wider perspectives on our past societies, it may be worth initially exploring the purpose and value of comparison a little further. With what intentions do we search for likenesses, and how do we select them? Asked like that, we may answer that comparison between different communities living in the north-west European lowland during a few centuries in the middle of the first millennium BC is worthwhile, because they might have found their closest match as regards living conditions in each other. This closeness was rooted in and expressed through shared technological knowledge, similar subsistence practices, comparable environmental conditions, and social organisations that were alike. Their comparison may therefore provide potential interpretations that can help us to engage more broadly with both specific and general aspects of the period. The specific insights arise from the degree to which comparison helps us to locate practices affected by local understandings of how, for instance, needs, choices and possibilities may be formulated and acted upon. In contrast, the generalised perspective comes from the revelation of commonalties

between these communities that override varied physical conditions and local traditions.

At the same time, it should be recognised that our understanding of both the English and the Danish Late Bronze Age to Early Iron Age societies is built around many unknowns, including inferences based upon analogies drawn from ethnographic case studies. Comparison between the areas should, therefore, not aim at new models or explanations *per se*. Indeed, different Bronze and Iron Age societies cannot explain each other, even though their comparison might enlighten us. Thus, the most useful outcome of the exercise is from helping us to locate the characteristics of each case study, as this gives us a means against which to identify shared as well as specific versions of common themes. The aim is to use the comparative perspective to enhance our appreciation of that which we are looking at, and what it is we wish to explain. In this regard, comparisons have been surprisingly underused, often leaving us badly equipped for a nuanced characterisation of our own case studies.

The next step is to structure the comparison in a way that will initiate new concerns and debates. The aim is to gain not just from the results but also from undertaking the exercise. To provide this focus, a point made by the nineteenth-century Danish literary critic, Georg Brandes, is used as a framing device (also used in Sørensen 1992). Brandes explains (in a discussion of why Shakespeare is a great writer) how the scenes capture the entire drama of life, in a sense its inner core, through a literary strategy, which simultaneously gives attention to infinite small details and expresses boundless and grand gestures. By inference, Life is found in the 'space' suspended between these extremes, being fed by the tension that exists there.

The discussion here does not aim to locate such tension, but Brandes' argument will be used to suggest that our comparison may capture some of the essence of past societies if we focus upon, on the one hand, some of the minute, routine and mundane aspects of the ways they lived; and, on the other, on some of the exceptional and overtly important things of which they were also capable. As an heuristic device, two scales of comparison will therefore be used. First, domestic arrangements and, second, highly formalised or

ritualised practices, such as hoards and graves, are selected as the most pertinent for considering differences and similarities in the life of communities in northwestern Europe during the Late Bronze and Early Iron Age.

Setting the scene

In Denmark, the pre-Roman Iron Age refers to the period 500 BC to 0. However, to correlate with the British chronology for the first millennium BC, this paper will focus upon the last phase of the Bronze Age (Montelius period VI, generally equated to Hallstatt C–D1, 730/20–530/20 BC; Jensen 1997, fig. 13), and the earlier part of the pre-Roman Iron Age (period I, 530/20–300 BC). It should be noted that discussions of the British chronology, including the most recent refinements (e.g. Needham 1996; this volume), are based on a wider range of criteria than those used for the first millennium BC chronology in Denmark (Jensen 1997). This makes it difficult to correlate the two chronologies with regard to the nature of change highlighted by each of them.

During Hallstatt C and D, major changes took place in Europe, and these are part of the background against which the characteristics of north-western Europe have to be appreciated. Current views hold that during this period, various cultural (and presumably political) cohesive forces that had previously united large areas, such as the so-called Atlantic Bronze Age, the Urnfield Culture, and the Nordic Bronze Age fell apart. In their place we find new cultural trajectories played out at regional levels and through local styles. These changes have been subject to a range of explanations (Sørensen and Thomas 1989a). Some interpretations have involved economic and environmental crisis. Others have argued that the political and cultural changes in central Europe left northern and western Europe isolated and detached. There are also explanations that more or less vaguely refer to internal social dynamics, as well as more specific arguments about prestige goods relations and world systems (Kristiansen 2000).

These elements of change have, however, increasingly become recognised as part of the scenery of the time; they were involved with setting some of the preconditions for change, but none of them can be identified as the direct universal reason for the changes

observed. They cannot explain how different societies acted and responded during this period. As a result, we are now seeing increasing attention being paid to the study of regional or local changes. A distinct interest in tracking oscillatory tendencies between periods of dissolution – where societies fragment into smaller and relatively autonomous units – and periods of reconsolidation – which see their merger into larger social units – can be detected in these discussions (e.g. Fokkens 1997; Kristiansen 2000).

Against this background, the inhabitants of both England and Denmark can be characterised broadly as peasant communities on the margin of the centres of new cultural developments in Europe. The political hierarchy and the concentration of power appear limited or modest in both areas; in their place, life seems dominated by subsistence activities and domestic tasks. There is also a surprising stability in the manner in which daily life is organised. Whilst we see a large range of local and regional variations expressed through different materials and practices, these never reach the intensified cultural expressions and innovations seen elsewhere in Europe. Even iron, which one might have expected to be an exciting new and prestigious material, that would add a distinct vocabulary to the language of material culture, is apparently used mainly for modest or strictly functional purposes. Or it largely replaced existing types made in bronze, such as pins and swords (Sørensen and Thomas 1989a). Insofar as these communities share characteristics that set them apart from other parts of Europe at the time, our comparison gains an extra dimension.

In minutia – the centre of domestic life

The prehistoric house has received much attention in recent years, especially in British archaeology, where the development of spatial archaeology injected new interest into the architectural order and cosmological schemes embedded within Bronze Age and Iron Age houses (e.g. Parker Pearson 1996). In Denmark, interest in the house has focussed more explicitly upon constructional details and differences in size (e.g. Ethelberg 2000). Only Webley's recent work (2002; 2007), which investigates domestic arrangements inside

Early Iron Age houses in western Denmark, is clearly using an approach that sees the house as a social and semantic 'stage' as well as an arena of routine practices.

The difference between the roundhouse building tradition in England and the longhouse tradition in Denmark (as on most of the Continent) is well known. The dissimilarity in house architecture is nonetheless worth emphasising, since it would have influenced how ideas such as home, house and households were conceptualised and materialised; the difference would therefore have impacted upon life in and around the domestic centre in various ways. Despite many attempts at challenging the strict geographical pattern of the two building traditions, it is now clear that the general pattern holds. In particular, while there are a few exceptions of longhouses in England, as at Barley Croft (Evans and Knight 2001) and Down Farm (Green *et al.* 1991), earlier interpretations that suggested that roundhouses were found in the Low Countries have mainly been rejected (for a discussion of the longhouse in the Netherlands see Fokkens 2003). Furthermore, as we move into the north German plain and Denmark there are no exceptions to the norm of longhouses.

It is not immediately obvious how this distinction should be evaluated; although it would clearly have affected the organisation and flow of a wide range of practices performed within – and in relationship to – the house. The implication is that, at the most basic level, domestic life was affected by different physical and logistic constraints, and performed within different cultural matrices. This would cause distinct routines, and thus expectations and conventions, to develop in connection with them. It would, for instance, have influenced labour divisions within cohabiting units.

Two elements stand out as particularly noteworthy with regard to the effect that differences in the shape and organisation of the house may have had upon various domestic activities. One is the position of the hearth, an architectural element which 'fixes in space a range of on-going primary activities associated with the sustenance of the community' (Sørensen 2000, 161), and which structures and constrains space, thus affecting what activities may be done at particular parts of a locale (*ibid.*, 160). In roundhouses the hearth is usually found at the centre, while in the longhouse it

may be found at different positions along the central axis, although it would commonly be placed towards one end. In addition, in the longhouse it is possible for there to be several hearths along the central axis, suggesting divisions based on, for example, tasks or age or lineage (Kristiansen 1998).

Moreover, within the roundhouse, it is likely that domesticity and related activities were organised around two central points: the entrance and the hearth, as discussed for the British Iron Age by – amongst others – Oswald (1997), and Parker Pearson and Richards (1994). Further spatial variations and elaboration of divisions, through for example partition walls, tend to radiate from, or are centred upon, these two points. Very much this principle was applied by Drewett (1982) in his interpretation of activity zones in the Bronze Age huts at Black Patch, and the model discussed by Evans for the Early Iron Age houses at Haddenham is similar (Evans 1997; Evans and Hodder 2006). The one-doorway roundhouse, which is by far the most common type, also provides a particular version of spatial syntax, with depth relating directly to the distance from the entrance (e.g. Parker Pearson 1996), unless internal partitions are erected, as well as there being only one access route into the house.

The longhouse is different in subtle, but significant ways, in terms of how communities ‘functioned’ on the ground, so to speak. Its basic structure is linearity. Even the hearth, which may be a central point for activities radiating from it, is usually placed within this linearity. The house is therefore immediately dividable into blocks, rather than concentric circles or slices radiating from a point (i.e. how the architecture facilitates or even ‘suggests’ divisions, as opposed to divisions being imposed in disregard of the available space). The house usually has two doorways, suggesting two axes of division, one from door to door, and the other along the long axis. This means that methods such as spatial syntax are difficult to employ, as questions about distance immediately raise the issue of to which entrance, end, or side, this refers. The entrances and the length of the house can thus take on very explicit and overt roles in the grading and differentiating of either practices, or people, or both. In addition to the inside : outside distinction, the longhouse makes possible a clear distinction between the front and the back,

and between the two ends. So far it seems that these differences were not particularly embellished in Late Bronze Age houses, while such distinctions and emphasis do appear during the Iron Age. In this period, one of the entrances may, for instance, be enhanced with a pavement, or the material used for the floors may differ between the two ends of the house (Webley 2002). It is interesting that this more explicit annotation of the different parts of the house appears at a time when individual houses become increasingly integrated into larger social conglomerates in the form of villages.

Such an explicit distinction between the different parts of the longhouse can also be found on more recent farms, pointing to the obvious semiotic potentials of this architectural form, as well as the social urging towards expressing them. For instance, ethnological analysis of farms in Denmark from the eighteenth to twentieth century AD shows how, until recently, some of these potentials were utilised in social signalling (Dragsbo and Ravn 2001).

In some areas, such as the island of Als, architecturally different types of farm buildings, varying from the courtyard farm to a modern version of the longhouse, have coexisted until now (*ibid.*, 298). In such areas, a concept of a front and back is strongly expressed in farms taking the form of longhouses but is less clearly articulated for other types. This is seen in one of the long sides of the farm being further elaborated to present it as the *front* of the house, which was also the focus for various architectural details and elaboration which provided social and cultural signals about identity and status (*ibid.*, 301). The backs of these farms, in contrast, are plain and lack in structural planning. It has been suggested that such farm units are composed of citations and fragments, which despite their apparent lack of logic were important elements of communication. If similar ideas can be applied to the Late Bronze Age and Early Iron Age houses of the two areas, we will have to recognise that they might have participated in developing alternative domestic habitus.

The other point of significance is the cohabiting of people and animals in longhouses. Two key concerns are expressed within this type of arrangement, namely closeness as well as distinction between people and animals, and we see regional and temporal variations within each. For instance, in the Netherlands, the

relationship between people and animals probably shifted during the Late Bronze Age, as the cohabiting unit changed from extended families to single families with their cattle (Fokkens 2003). In Denmark there are similarly several unambiguous Bronze Age examples of the use of either one end or one side of a house for stalling, and this proximity between humans and beasts continues as a theme during the Iron Age. In some types of farms this link is only being broken now. A recent discovery of a burnt down Iron Age house at Nørre Tranders, northern Jutland, illustrates this practice very poignantly (Fig. 1). While one end – the less well-preserved – of the house had floors made up of chalk, the other had an earthen floor with arrangements for the stabling of animals. The remains of at least 19 animals and five people killed in the fire were found. Amongst the animals, which were found in clusters, were five sheep (three of them pregnant), two newly born lambs, two horses, and seven adult cattle. A suckling pig was discovered amongst the sheep and a puppy was found between the cattle (Nielsen 2002).

Whilst in England, the arrangements for the keeping of animals within the Late Bronze Age and Early Iron Age settlement compound remain a matter for discussion, there is little to suggest that animals were regularly housed together with people (in contrast to Scotland, where structures housing both animals and people are thought to have existed, e.g. Pope this volume). In most of England, it seems likely that animals were normally kept either in separate round structures, or in pens within the larger compound.

It is therefore possible to argue that the enclosure around the Late Bronze Age roundhouse functioned as an extension of the house, as an expansion outwards of the activities taking place within it. The relationship between the interior of the house and its surrounds might, therefore, have been relatively open-ended, making possible a wider range of arrangements than in the case of the longhouse. It is useful, therefore, to approach the enclosure – rather than the house – as the domain of these households (cf. Evans and Hodder 2006). In consequence, the area enclosing the roundhouse was probably not ‘public’ space as such, but may be thought of as akin to the space enclosed within architectural forms such as the Roman villa or courtyard farms.

The Late Bronze Age longhouse in Denmark was not enclosed, nor

did it use other means of expanding or controlling the household beyond the walls of the building. At the same time, there are no obvious expressions of public or social space in association with such houses. The house physically and symbolically accommodated the household, and the space outside the building merged without physical borders with other spaces. Thus, the Late Bronze Age longhouse appears as a closed economic and social unit located in the landscape. It is also striking that the activities associated with these households are either spatially limited to within the house, or appear unbounded and rather informal in their spatial organisation. Thus field systems of the Late Bronze to Early Iron Age appear strikingly different in England and Denmark. The impression gained from recent excavations of Late Bronze Age fields buried beneath sand at Bjerre, northern Jutland, is almost of organic growth, rather than an abstract division of the landscape (Fig. 2). The ploughing pattern shows how at this site, twelve 'fields' varying in size from 300 to 1000 m², and with different orientations, were placed patch-like within optimal parts of the environment (Bech 1997). The contrast to the organisational principles behind the large-scale field systems and other types of land divisions made by contemporary communities in England is thought provoking. In Denmark, fences and other forms of physical delimitation first became a common feature during the Early Iron Age, as the single household became integrated into larger social units.

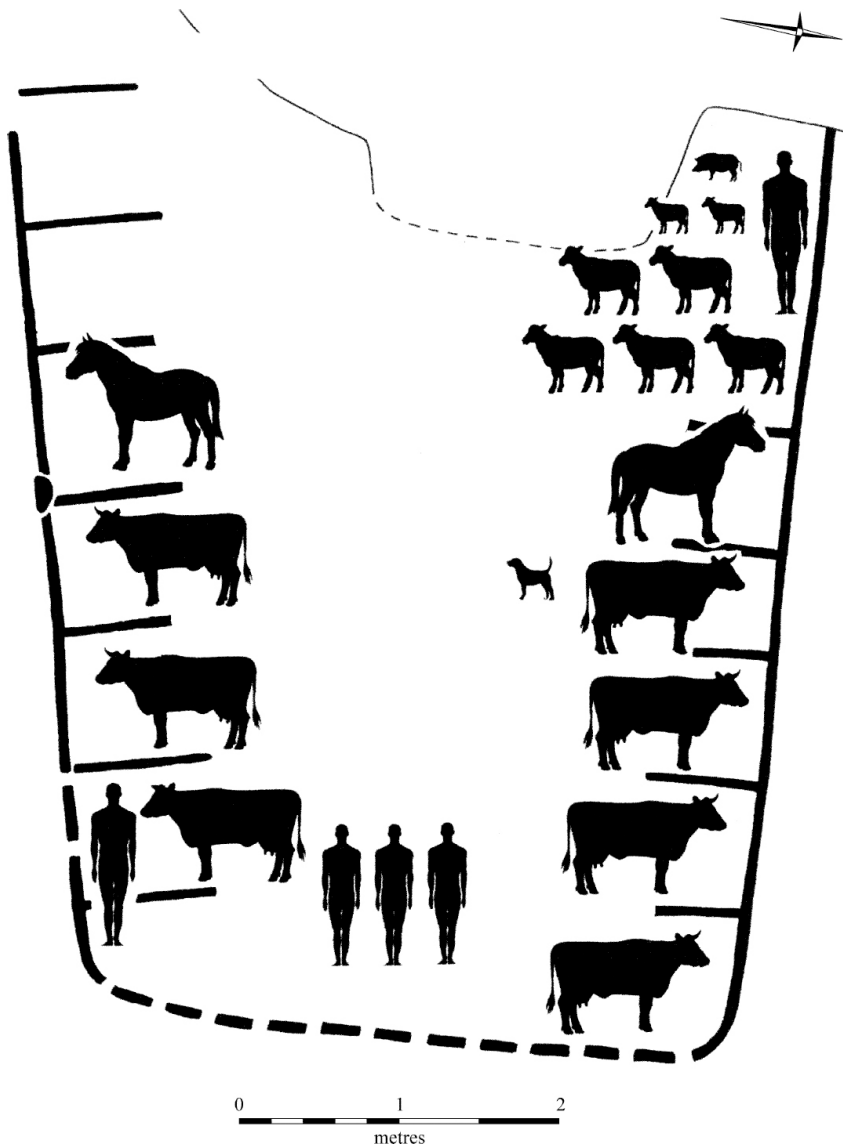


Fig. 1. Nørre Tranders, Denmark. The stable end of a burnt-down Early Iron Age house (after Nielsen 2002, redrawn by A. Hall).

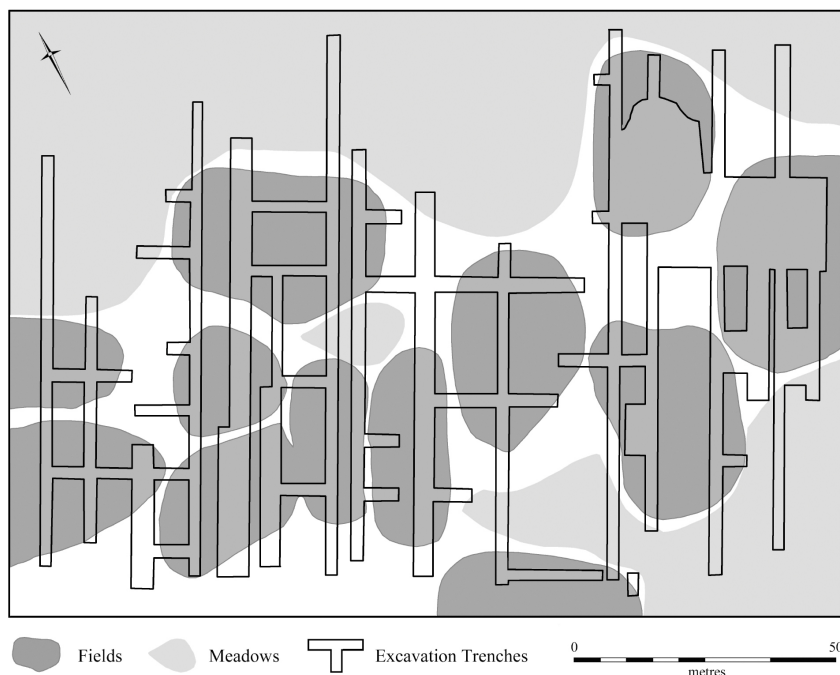


Fig. 2. Late Bronze Age field systems from Bjerre, northern Jutland (after Ethelberg 2000, fig. 50 and Bech 1997; redrawn by A. Hall).

We may therefore argue that, whilst these communities were in clear contrast to those in other parts of Europe and were similar to each other in their status as rural self-sufficient dispersed farmsteads and hamlets, the conditions of their lives at a mundane practical level made them different. In Denmark, the Late Bronze Age house was both home and household. Clear structural and physical divisions are seen within this unit, while the organisation of the larger social and physical landscape appears little formalised. In Britain, the importance of the roundhouse comes from being the central structure around which a larger, more loosely structured household space was formed. While division of space and of activities must have taken place within these enclosures, these were not concretised in material constructions. At the same time, at certain periods in the Later Bronze Age and the Iron Age, much energy was invested in constructing land divisions (e.g. Bradley and Yates this volume; Giles this volume). The scale at which this was conducted seems to imply not just the ordering and division of land

into different blocks, but also the extension of the influence of individual households over a large interconnected area.

Despite such differences, the household in both areas acted as the unequivocal centre of daily life, and in both we lack distinct public spheres (i.e. areas constructed for communal use by people from different households) within the settlements. In this characteristic, both England and Denmark differ from, for example, the communities living in densely packed lake-villages such as Cortaillod-Est (Arnold 1986), or in the large fortified sites found in the north-east European lowland, as at Biskupin (Scarre 1998). In such places, people would have stepped directly from the house into communal alleys, and much labour went into building and maintaining structures not associated with individual households, although the wet environment must also have been a factor in these arrangements. Thus, despite apparently deeply entrenched structural differences in the organisation of the household and in people's living and working conditions, English and Danish Late Bronze Age to Early Iron Age communities can both be understood as local versions of traditional small-scale communities centred around the farmstead and its occupants.

Their differences, while apparently minor and rather mundane, are nonetheless worth emphasising as they have distinct implications for a range of relationships ranging from issues of ownership and control to questions about labour division and economics. Such differences would also influence how the pressure towards social agglomeration, which evidently affected these areas during the first millennium BC, was negotiated. For instance, the integration of roundhouses – including their compounds and associated field systems – poses quite different challenges to the integration of several longhouses. It is therefore interesting to note that different trajectories are seen during the Early Iron Age and that all, although to varying degrees, reflect transformation and disruptions of existing traditions.

In England, the Late Bronze Age roundhouse tradition is in fact followed by wide variation in settlement form. Some sites were similar in their organisation to the Late Bronze Age ones, although they were often larger, more densely occupied and with a greater complexity in terms of activities taking place within it. Other sites,

however, suggest radically changed organisation. The extreme of this is the hillfort; some of these were now densely packed with a variety of structures, suggesting an explicit division of labour and direct dependency upon other communities. In such situations the roundhouse has become separated from its enclosure – and from the relationship that this entailed – and the concept of household would have undergone reinterpretation. Both in England and in Denmark, one of the significant issues affecting the process of larger social integration during the Iron Age would thus have rested upon a reinterpretation of the house, and a change in its status as the centre of social and economic life. Not only did a wider range of settlement types come into existence during the Early Iron Age, but also different kinds of households coexisted.

In Denmark, the single farmstead continued as before, but possibly more often longhouses were incorporated into larger units, and began to claim and define their space beyond the house as fences were used to demarcate their outer limits. In due course, a dual understanding of household and of settlement developed, and some settlements were now enclosed by fences, which defined the entire site as a coherent unit. In these processes we see the household being spatially redefined and reinterpreted. Thus, if we are correct in assuming that the second half of the first millennium BC saw increased centralising tendencies, we can propose that the building traditions of the two areas would have enabled and hindered this in distinct ways, forcing particular strategies. It can, therefore, be suggested that the domestic architecture of the two areas was distinctly different in ways that must have affected daily life in both minor and more significant ways.

Rituals and the extraordinary

Now let us move our gaze to the other extreme: how may we compare the two areas through their extraordinary gestures? Here, it is more difficult to identify a common ground for the comparison. This may partly be due to the difficulties of locating, and in particular interpreting, such extraordinary or special expressions within the regional sequences themselves. Burials and hoards may, however, be identified as dramatic events in which society's concerns and attentions become focussed on rather specific and

well-defined contexts.

Graves

In Denmark, we see a basic continuity in burial rites from the beginning of the Late Bronze Age on into the Iron Age. This does not mean that there are no changes; rather change seems to concern further transformation of the cremation ritual itself and the emergence of clearer regional variations in burial arrangements, such as the use of small tumuli over cremations in southern Jutland (Becker 1961). In general, cremation continues to be dominant until the end of the pre-Roman Iron Age, and there is a tendency towards less and less paraphernalia around the burial, with the cremation pit increasingly becoming identical with the burial itself.

At the same time, despite the paucity of material elaboration, graves were probably incorporated within some kind of cemetery in most areas. There are distinct regional variations in the character of such cemeteries, their size ranging from large ones in south-western Jutland – many of which contain more than a thousand burials – to much smaller ones in other parts of western Denmark. Burials are scarce in eastern Denmark; this may be due to the lesser degree of differentiation between the cremation itself and the burial, formal constructions separate from the cremation being less common here.

Grave goods, which decrease in variability and quantity from the start of the Late Bronze Age, have disappeared almost entirely at the end of this period, whilst objects, such as dress fittings, are burnt with the body (Sørensen 1989). This is evidently a case where the label ‘grave goods’ is problematic. One may consider whether the items in question, typically razors, tweezers and pins (Fig. 3), should be recognised as potentially part of the social person, being extensions of the body and signatures of identities and roles. It is worth noticing that there appear to be ‘standard sets’, such as razors and tweezers (*ibid.*), which may constitute a distinctly different element of the grave display than some of the less frequent and less body-orientated objects, such as miniature swords.

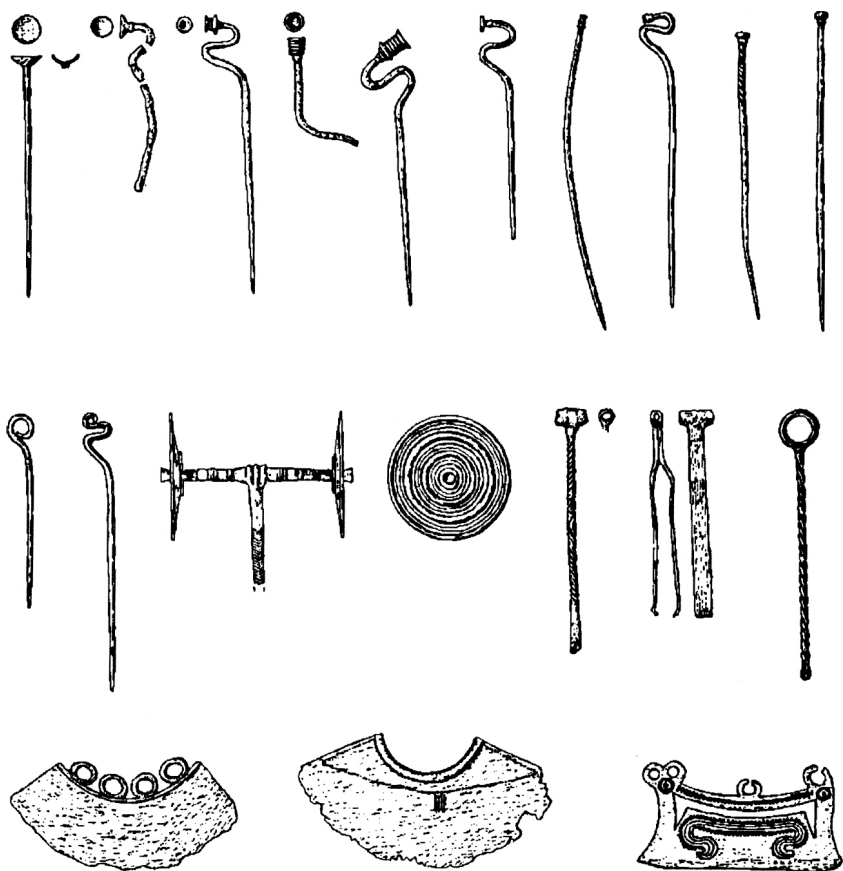


Fig. 3. Examples of typical objects found in period VI cremation urns (after Jensen 1997; redrawn by A. Hall).

It is difficult to see how these practices can be compared with the sequence in England. The traditional idea that formal burial rites disappeared after the Middle Bronze Age has been increasingly challenged (see Brück 1995 for a review of the evidence), but there still seem to be gaps in the sequence of formal burial practices. It is also difficult to trace a coherent trajectory in attitudes towards death and the body during this period. In particular, human bones (possibly as distinct from both the deceased person and the human body) are exploited in very particular ways. They were particularly incorporated into practices that mark spaces, and thus appear integrated into the concerns and meanings expressed through the construction of boundaries of various kinds.

different types of objects.

Both areas have in common, however, that hoards were normally one-off events, single happenings. There is no evidence of individuals returning to the same spot, at least in the sense of additional deposits being made there. Places of deposition were not elaborated through architecture, nor apparently were they physically enhanced or marked in other ways. The acts and their significance were probably communal and witnessed; indeed some hoards are too heavy to have been carried by one person alone. Oral tradition probably gave such practices a significant place in social memory. This would have created an incentive for future depositions (as long as these memories and accounts mattered) and probably caused certain types of landscapes or stretches of lands, such as rivers in England and bogs in Denmark, to acquire associations and meanings.

While deposition did affect the amount of objects in circulation and thus all the relationships in which bronze objects were used or exchanged, the practice is remarkable by the invisibility of the end-product. The act of deposition, the memories thereof, and the acts of recounting what happened, would provide communities with an intangible source of reference, neither specifically marked in the landscape nor accessible, but nonetheless of significance. Being so intangible one may expect that the meaning and possible 'symbolic capital' that arose from such activities could alter through time. Indeed, deposits might have been an arena of intensified social discourse and the reasons for – and 'outcome' of – these practices might have been moulded to the changing needs of the communities.

Deposition might thus have been a means of releasing social tension, and we may be mistaken in our search for a universal interpretation of hoards. Emphasising this potential dimension of deposition, it thus becomes particularly noteworthy that in both areas we see intensification of the practice at the end of the Bronze Age. In England, this is expressed in what has been seen as 'a peak' in hoarding activities. We see, for example, an increase in the number and size of hoards, many of which are concentrated in special areas such as the lower Thames, while at the same time, there is very little innovation in terms of types included or their

compositions. In Denmark, intensification may also be detected but is differently expressed. Here we find increased categorisation of the hoards in terms of combinations of types, with certain schemas of deposition, such as paired swords or large hoards with unique or imported objects, emerging or becoming more pronounced than before.

Finally, this practice of deposition that characterised the areas in the Late Bronze Age decreases or disappears during the Early Iron Age. In Denmark the change is rather abrupt, with the large composite hoards disappearing during Period VI. Only hoards with pairs of neck rings continue as a regular practice during the first phase of the Iron Age. For the rest of the Early Iron Age, it is difficult to recognise any specific scheme of hoarding in the few single finds. The late pre-Roman Iron Age hoard from Hjortspring, which included a boat and weaponry for its oarsmen, seems to introduce a distinctly different depositional practice, which points forward to the rich weapon deposits from later periods.

These later deposits are radically different from the Bronze Age ones as regards size, motivation and depositional history, with repeated deposits being detected at many of them. This is for instance the case at the famous weapon deposit at Illerup (Ilkjaer 2000). In England, it is even more difficult to assert any reminiscence of Late Bronze Age hoarding practice amongst the Iron Age finds (Wait 1985). Hoard deposition had fallen away dramatically by the Llyn Fawr period (cf. O'Connor this volume) and there were then virtually no finds until the late Iron Age.

We should therefore be cautious of trying to link these much later Iron Age hoards with Bronze Age practices. While the end-product, deposited metal, may appear to us very similar, the cultural understanding that affected these practices could well be significantly different. It is, however, equally clear that the changes and possible transformation in hoarding practices during the middle of the first millennium BC need further investigation in both countries in order to provide more detailed knowledge about how this major dimension of Bronze Age life came to an end.

Conclusion – fragments of life

Our ability to draw conclusions from these comparisons begins to

appear entirely interwoven with the question of scale. England and Denmark, in fact all the regions of north-west Europe, were fairly similar towards the mid first millennium BC when we compare them with other parts of Europe. They were composed of small-scale, dispersed farming communities, living in houses, which were replaced within a few generations. They lived in close contact with their animals and while some of them were specialists, they were probably largely self-sufficient and used mainly to depend upon, and collaborate with, their immediate community. They were partners to long-distance exchange and trade, but it is difficult to discern the effects of this beyond influence on object types and access to raw materials.

This does not imply total isolation, but it is important to appreciate that many of the stable elements of life, such as domestic arrangements, ceramic production, subsistence practices, or burial forms, did become increasingly local during this period. This life was different from that of those living in some of the densely packed settlements in other parts of Europe, or those who produced for such centres. So can we conclude that the two areas are similar, do they represent parallel developments, are they like cousins?

The similarities do not mean that communities in England and Denmark lived their life in like manners. At a mundane level, we see differences in how they organised the practicalities of their lives, and we see how these details in subtle but distinct manners would have underscored their daily routines. Their experience of life differed. At the opposite extreme, at the dramatic highpoints, we may decide that the underlying similarities in the 'logic' of depositional practice, despite the use of different schemas, were the crucial characteristic which gave meaning to these practices. In this significant sphere, the two areas may have shared a way of thinking that made hoarding a meaningful practice. We must also, however, note the striking differences in the use and treatment of the body, including apparently very different responses to death and the use of burials as a regular social practice. Thus, it seems, there are both profound differences and significant similarities when we look beyond the minutiae of the household, and into social practices.

If our comparison aimed to shed light upon the communities of the two areas, we must accept that the result is modest. Meanwhile,

the comparison may also suggest why this is the case. The significant underlying structures affecting practices during this time appear to have been formed increasingly within local contexts. This would have favoured tradition as a central formative mechanism, and references to normative position would be made continuously.

This does not mean that alternative practices did not arise. On the contrary, within the performance and development of conventions, there is allowance for local transformation of common practices to become the new norm. This might be seen, for example, in the divergent attitudes to human bones that we find in England. Rather than clearly taking the form of a challenge to established norms or being a subversive or conflicting practice, this appears as a gradual shift towards the inclusion of human bones with other materials in the marking and making of important divisions and associations within the domestic compound. This may be seen as a continuation of a theme already noticed during the Middle Bronze Age, as burials become more closely associated with settlements. In Denmark, despite changes, the transformations taking place maintain the separation between the domestic arena and that of death.

The characteristics that England and Denmark share may therefore be as much about absence, as about what was happening in both of them. Rather coarsely, one may postulate an absence of innovations, impulses and dynamic change. Around the middle of the first millennium BC, both areas can be characterised by their slow rate of change, almost a resistance to change, and their tendencies towards inwardness and fragmentation into regions. We may wonder whether it is because of this regional rootedness that the two areas – despite apparently being so different – nevertheless seem alike.

Acknowledgements

I am very grateful to Chris J. Evans for sharing both his knowledge and his ideas about the Iron Age. Without the impetus arising from our discussions, attempting to compare the two areas would have felt much less relevant and possible. I would also like to thank J.D. Hill, S. Needham and L. Webley for sharing their views on this period.

Bibliography

- Arnold, B. 1986. *Cortaillo-d-Est, un village du Bronze final 1. Fouille subaquatique et photographie aérienne*. Saint-Blaise: du Ruau.
- Bech, J.H. 1997. Bronze Age settlements on raised sea-beds at Bjerre, Thy, NW-Jutland, in J.J. Assendorp (ed.), *Forschungen zur bronzezeitlichen Besiedlung in Nord- und Mitteleuropa (Internationale Symposium, Mai 1996, Hitzacker)*, 3–15. Espelkamp: Internationale Archaeologie 38.
- Becker, C.J. 1961. *Førromersk jernalder i Syd- og Midtjylland*. Copenhagen: Nationalmuseet.
- Brück, J. 1995. A place for the dead: the role of human remains in Late Bronze Age Britain, *Proceedings of the Prehistoric Society* 61, 245–277.
- Dragsbo, P. and Ravn, H. 2001. *Jeg en gård mig bygge vil – der skal være have til. En kulturhistorisk-etnologisk undersøgelse af lange linjer og regionale kulturforskelle i gårdens landskab: Bygninger, haver, og omgivelser ved danske landbrugsejendomme 1900–2000*. Esbjerg: Landbohøiologisk Selskab.
- Drewett, P. 1982. Late Bronze Age downland economy and excavations at Black Patch, East Sussex, *Proceedings of the Prehistoric Society* 48, 321–400.
- Ethelberg, P. 2000. Bronzealderen, in P. Ethelberg, D. Meier and D. Robinson (eds), *Det Sønderjyske Landbrugs Historie. Sten- og Bronzealder*, 135–280. Haderslev: Haderslev Museum.
- Evans, C.J. 1997. Hydraulic communities: Iron Age enclosure in the East Anglia fenlands, in Gwilt and Haselgrove 1997, 216–227.
- Evans, C.J. and Knight, M. 2001. The ‘community of builders’: the Barley Croft post alignment, in J. Brück (ed.), *Bronze Age Landscapes: Tradition and Transformation*, 83–98. Oxford: Oxbow Books.
- Evans, C.J. and Hodder, I. 2006. *Marshland Communities and Cultural Landscape. The Haddenham Project, Vol. 2*. Cambridge: McDonald Institute for Archaeological Research.
- Fokkens, H. 1997. The genesis of urnfields: economic crisis or ideological change?, *Antiquity* 71, 360–373.
- Fokkens H. 2003: The longhouse as a central element in Bronze Age daily life, in J. Bourgeois, I. Bourgeois and B. Cherretté (eds), *Bronze Age and Iron Age Communities in North-Western Europe*, 9–38. Brussels: Koninklijke Vlaamse Academie van België voor Wetenschappen en Kunsten.
- Green, M., Bradley, R. and Barrett, J., 1991. The excavations: Down Farm enclosure and cemetery, in J. Barrett, R. Bradley and M. Green, *Landscape, Monuments and Society. The Prehistory of Cranborne Chase*, 183–214. Cambridge: Cambridge University Press.

- Gwilt, A. and Haselgrove, C. (eds) 1997. *Reconstructing Iron Age Societies. New Approaches to the British Iron Age*. Oxford: Oxbow Monograph 71.
- Ilkjær, J. 2000. *Illerup Ådal – et arkæologisk tryllespejl*. Århus: Moesgård.
- Jensen, J. 1997. *Fra Bronze- til Jernalder. En kronologisk undersøgelse*. Copenhagen: Nordiske fortidsminder, Serie B, 15.
- Kristiansen, K. 1974. Glerupfundet. Et depotfund med kvindesmykker fra bronzealderens femte periode, *Hikuin* 1, 7–38.
- Kristiansen, K. 1998. From stone to bronze: the evolution of social complexity in northern Europe, 2300–1200 BC, in K. Kristiansen and M.J. Rowlands, *Social Transformations in Archaeology: Global and Local Perspectives*, 106–141. London: Routledge.
- Kristiansen, K. 2000. *Europe before History*. Cambridge: Cambridge University Press.
- Needham, S. 1996. Chronology and periodisation in the British Bronze Age, *Acta Archaeologica* 67, 121–140.
- Nielsen, J.N. 2002. Flammernes bytte, *Skalk* (December 2002) 6, 5– 10.
- Oswald, A. 1997. A doorway on the past: practical and mystic concerns in the orientation of roundhouse doorways, in Gwilt and Haselgrove 1997, 87–95.
- Parker Pearson M. and Richards, C. 1994. Architecture and Order. Spatial representation and archaeology, in M. Parker Pearson and C. Richards (eds), *Architecture and Order. Approaches to Social Space*, 38–72. London: Routledge.
- Parker Pearson, M. 1996. Food, fertility and front doors: houses in the first millennium BC, in T.C. Champion and J.R. Collis (eds), *The Iron Age in Britain and Ireland: Recent Trends*, 117–132. Sheffield: J.R. Collis publications.
- Scarre, C. 1998. *Exploring Prehistoric Europe*. Oxford: Oxford University Press.
- Sørensen, M.L.S. 1987. Material order and cultural classification: the Bronzes from late Bronze Age Scandinavia, in I. Hodder (ed.), *The Archaeology of Contextual Meaning*, 90–101. Cambridge: Cambridge University Press.
- Sørensen, M.L.S. 1989. Period VI reconsidered: continuity and change at the transition from Bronze to Iron Age in Scandinavia, in Sørensen and Thomas 1989b, 457–492.
- Sørensen, M.L.S. 1992. Hvori består forholdet mellem ernæringsformer og levevis i yngre bronzealder i Skandinavien, in L. Forsberg and T. B. Larsson (eds), *Ekonomi och näringsformer i Nordisk Bronsålder*, 1–10. Umeå: Studia Archaeologica Universitatis Umensis 3.
- Sørensen, M.L.S. 2000. *Gender Archaeology*. Cambridge: Polity Press.

- Sørensen, M.L.S. and Thomas, R. 1989a. Introduction, in Sørensen and Thomas 1989b, 1–21.
- Sørensen, M.L.S. and Thomas, R. (eds) 1989b. *The Bronze Age–Iron Age Transition in Europe: Aspects of Continuity and Change in European Societies c. 1200–500 B.C.* Oxford: British Archaeological Reports International Series 483.
- Wait, G.A. 1985. *Ritual and Religion in Iron Age Britain*. Oxford: British Archaeological Reports British Series 149.
- Webley, L. 2002. *A Social Archaeology of the Iron Age Household. Domestic Space in Western Denmark, 500 BC–AD 200*. Unpublished Ph.D. thesis, University of Cambridge.
- Webley, L. 2007. Households and social change in Jutland 500 BC– AD 200, in C. Haselgrove and T. Moore (eds), *The Later Iron Age in Britain and Beyond*, 454–467. Oxford: Oxbow Books.

Familiar landscapes with unfamiliar pasts? Bronze Age barrows and Iron Age communities in the southern Netherlands

Fokke Gerritsen

Introduction

As archaeologists, we all share a fascination for the people who inhabited the past. It is therefore not surprising that currently more than a few archaeologists are extremely interested in the fascination that ancient people had for *their* past, for 'the past in the past' (e.g. Bradley and Williams 1998; Holtorf 1998–2002; Bradley 2002; Alcock 2002; Williams 2003; Van Dyke and Alcock 2003). Urnfield cemeteries of the Late Bronze Age and Early Iron Age in the Netherlands frequently demonstrate a spatial association with Late Neolithic to Middle Bronze Age grave monuments; in many cases older barrows are separated in time from younger urnfield graves by three centuries or more. The frequency with which this occurs indicates that we are looking at intentional interaction with remains from the past. Many have commented on the phenomenon, but the archaeological patterns have rarely been studied in any detail (Waterbolk 1962, 13; Verwers 1969, 20; Kooi 1979, 132–4; Verlinde 1985, 388; Fontijn 1996, 79–81; Theunissen 1999, 102–3; Gerritsen 2003, 140–5). This article reviews the evidence we have for this practice in the southern Netherlands and makes some suggestions for its interpretation, in addition to evaluating a currently common interpretation of the reuse of older barrows as a strategy of legitimization of claims to land. It builds on the ideas proposed by Fontijn (1996) in a short but thought-provoking contribution to this debate.

In order to define my subject and approach, I will begin by

considering an isolated find made some time ago (Hendrix and Schaap 1995). At least ten ceramic vessels were found together in the ground at Stein-Nattenhoven in the province of Limburg, deposited there at some point in the Middle Iron Age. One of the vessels contained a ceramic spindlewhorl and a small stone axe, probably manufactured in the Middle Neolithic. This object (length 50 mm, thickness 12 mm) was made of a green to black jade, a stone that probably originated in northern Italy (Schut *et al.* 1987). To interpret this as an heirloom passed down the generations for close to three thousand years seems like a far stretch; we should probably think of an accidental recovery of an axe deposited or lost in the Neolithic. The fact that the object was deposited in the Iron Age, together with typically domestic items indicates that it had been re-enculturated and had become part of a set of contemporary artefacts. It is also likely that it was recognised as something made by humans or at least as something that resembled a tool, albeit made from a different material than the iron and bronze of Iron Age implements. Even though we know next to nothing about the conception of time among the Iron Age inhabitants of the southern Netherlands, it is conceivable that the axe was perceived as something made and used in a distant past. Perhaps the exotic origin of the stone was another element affecting how it was perceived and enculturated. It is an intriguing but unanswerable question whether the deposition of this axe near a stream, in a zone that may have been marshy in the Iron Age, had something to do with the place of its rediscovery in the Iron Age. Neolithic stone axes commonly come from wet contexts, those being the zones where their biography had ended in an act of deposition (Fontijn 2002, 59). This may also have been the context from which the axe was recovered in the Iron Age.

This example serves to illustrate several points. First, the past in prehistory is often studied through *lieux de mémoire* and landscapes, but objects circulating in society would of course also have presented the past. Objects covering the whole gamut from the new and familiar to the old and venerated or abhorred – as well as the occasional confrontation with the distant and unfamiliar – were constitutive elements of social memory and social life. It is out of practical considerations that I restrict myself in this paper to a

particular type of locality, but I am aware that by following this by now fairly well-trodden path, I run the risk of presenting a one-sided view on the role of the past for Urnfield period communities.

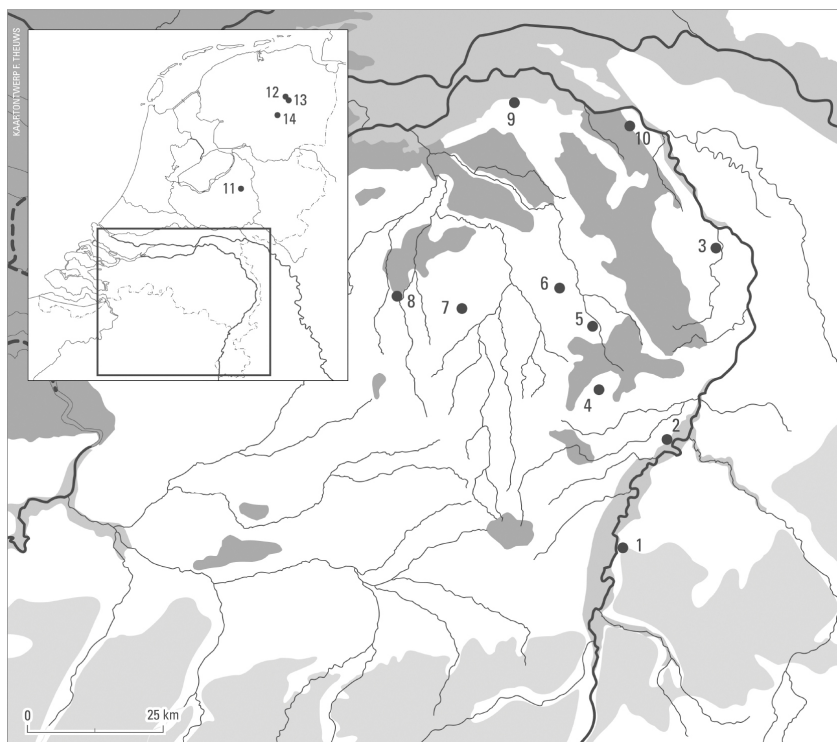


Fig. 1. Map of the southern Netherlands with sites mentioned in the text: 1. Stein-Nattenhoven; 2. Beegden; 3. Meerlo; 4. Weert; 5. Someren; 6. Mierlo-Hout; 7. Toterfout-Halve Mijl; 8. Hilvarenbeek; 9. Oss; 10. Haps; 11. Vaassen; 12. Zeijen; 13. Peelo; 14. Hijken.

Second, Iron Age communities lived in a landscape that had been structured by millennia of habitation. The landscape itself had become a manifestation of history; dwelling in it was to live ‘amidst that which was made before’ (Meinig 1979, 44; cf. Ingold 1993). Places had names, associations with persons, ancestors, lineages and communities and their actions. Landscapes contained physical traces throughout of former activities of habitation, land use, burial, as well as invisible traces and memories of depositions in watery places. Their inhabitants would encounter the visible remains of earlier communities, particularly the barrows from the Late

Neolithic and Bronze Age. Further, wherever pits and ditches were dug, where rivers eroded banks, where marshy depressions fell dry, ancient artefacts could appear; the past could potentially present itself everywhere. That this is not just hypothetical is indicated by the fact that there is, at least in Dutch, an archaeological term for artefacts pre-dating the context in which they are found, *opspit*, ‘that which was accidentally dug up in the past from older levels’. Mostly, however, this is seen as a methodological problem, rather than a form of ‘the past in the past’.

Iron Age communities in the southern Netherlands

The focus of this article is on the Early Iron Age (800–500 BC) and Middle Iron Age (500–250 BC) in the southern Netherlands (Fig. 1). The beginning of the Early Iron Age represents an arbitrary break when it comes to funerary traditions; together with the Late Bronze Age (1050–800 BC), the Early Iron Age is part of the Urnfield period. Late Bronze Age urnfields often continue in use into the Early Iron Age. Many of the basic elements of the funerary practices continue from the Middle Bronze Age (1800–1050 BC), including cremation, the use of urns, and the burial of the deceased under a barrow. The Early Iron Age differs from the Late Bronze Age in the total number of known and dated urnfields: 63 urnfields used in the Late Bronze Age as against 153 of Early Iron Age date (Gerritsen 2003, appendix 2).¹ There are no convincing arguments to explain this increase in terms of differential location-related or post-depositional factors, and it is quite likely that the Early Iron Age represents a period in which many new communities established themselves and founded their own cemetery, probably in the context of a phase of demographic growth (Roymans and Kortlang 1999; Roymans and Gerritsen 2002).

The burial communities sharing a cemetery in the Urnfield period comprised three to six households living in dispersed farmsteads. It is generally assumed that most members of a local community were cremated and interred in the urnfield. In contrast to the permanence of the urnfield, farmsteads are characterised by their transient, ‘wandering’ character. At the end of their life cycle, houses were not rebuilt in the same yard. Possibly, farmsteads were constructed in a new location when a household established itself, in the context of

the transmission of rights and social positions from generation to generation (Gerritsen 1999). If house and yard were identified with the group of inhabitants, the urnfield would have been a focal point in the settlement territory, and the identity and history of the local group.

We are poorly informed about the arable land within settlement territories in the southern Netherlands. Cultivation appears to have taken place through a dynamic 'Celtic' field system similar to that known from the north-eastern Netherlands and northern Germany (De Hingh 2000; Roymans and Gerritsen 2002, 264–70). Excavations of 'Celtic' field complexes in the northeastern Netherlands, for example at Hijken (Harsema 1991), Peelokleuvenveld (Kooi 1995–6) and the Noordse Veld near Zeijen (Waterbolk 1977a) indicate that within a settlement territory, the farmsteads were located within and near the arable lands, and that the cemetery was in close proximity. It is likely that the basic layout of a settlement territory in the Early Iron Age in the southern Netherlands was similar (Gerritsen 2003, 167–72).

The Urnfield period ends in the early part of the Middle Iron Age. There is no complete break in the burial rituals themselves, but after 400 BC there is no evidence for the continued use of the urnfields anywhere in the southern Netherlands. The urnfields became features in the landscape that had come down from the past; they themselves required a reaction from the Middle and Late Iron Age communities. At the end of this paper I will briefly discuss the changes in the role of the past in those periods as can be judged from the relationship between farmsteads and older urnfields.

A few words should be said here about the conceptualisation of 'community'. To my mind, co-residence is a fundamental element of local communities, but the idea of community is in the first place a matter of shared identity (Gerritsen 2003, 109–17; 2004). Its construction comes about through social practices that have symbolic aspects (Cohen 1985). These practices can, but need not be felt to have as their goal the demarcation of social boundaries around the local group. The notion of community can come about in all practices that are carried out at the level of the local group: burial rituals, agricultural activities, cult practices etc. Constructions of identity never result in wholly discrete, bounded groups, and

social collectives are always cross-cut by other social networks, alliances and identities. I would argue nevertheless that the local community was an important element of Iron Age societies in the Netherlands. The landscape plays a complex role in the constitution of local communities. Dwelling in the landscape contributes to shared feelings of belonging, of having roots in – and rights to – the land, because many of the social practices maintained by local groups are situated at particular locations in the settlement territory. The landscape is transformed, both physically and mentally, by these same practices; it becomes part of the history of the local group. This underscores the importance of studying the role of the past in the past, in order to understand the relationship between landscape and community as a construction of identity in particular cultural and historical settings.

Archaeological patterns of re-use of older barrows

I will direct my analysis primarily to the Early Iron Age part of the Urnfield period, even though the practice of reusing older barrows does not first occur in that period. All through the Bronze Age people re-used barrows for new burials, raised existing barrows, erected new post circles and modified them in other ways (Lohof 1994; Theunissen 1999, 54–75). Bronze Age communities erected barrows as future places of remembrance (Bradley 2002, 82–111), and more specifically, they appear to have constructed them intentionally as foci for future burials (Fontijn 1996; Fontijn and Cuijpers 2002, 175).

The main reason for restricting this paper chronologically is that it makes it possible to distinguish between the continuity in use of a location for burial, and re-use after a prolonged period of inactivity. Each time a community buried a deceased member in an urnfield it referred to the past, by making the decision to place the cremated remains near existing graves. However, I will work from the assumption that this was viewed as something different from re-using the site of burial monuments from a much older past (which can be stated in more general terms, that I assume that in their conceptions of time people would at least have differentiated a distant past from a nearer past, say the lifetime of the oldest living members of a community). With a newly established urnfield of the

Early Iron Age placed near a Late Neolithic, Early or Middle Bronze Age barrow or barrow group – provided we can rule out a purely accidental re-use of a location for burial – we know that a conscious decision was made to relate in some way to remains from a distant past. The same is true for Late Bronze Age urnfields, but this is harder to demonstrate because the chronological resolution often makes it impossible to rule out continuity.

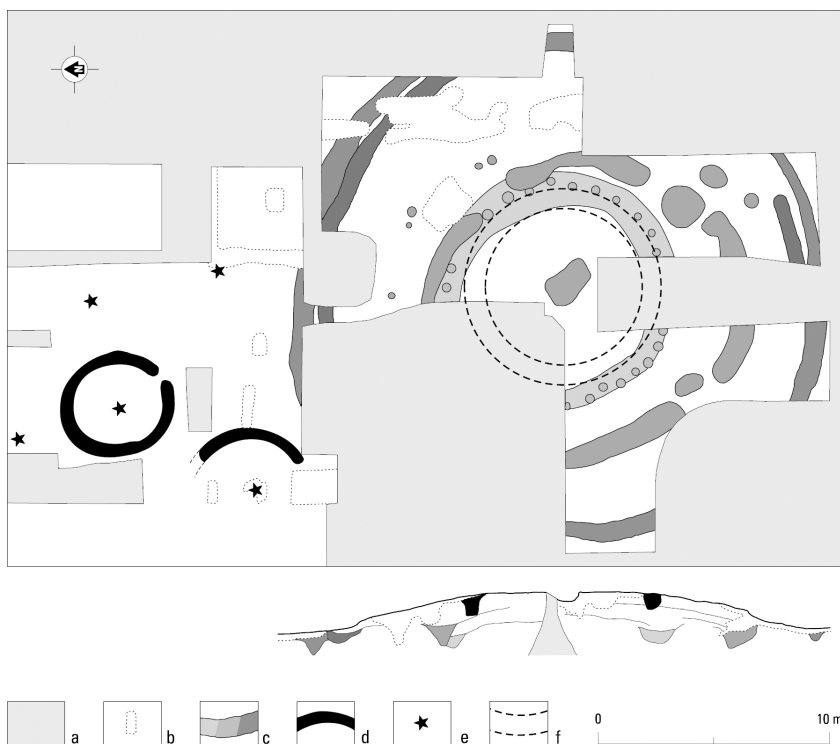


Fig. 2. Meerlo. Neolithic barrow with adjacent Early Iron Age cremation burials. The interrupted line in the centre of the barrow indicates a ring ditch dug into the top of the ancient monument, presumably in the Urnfield period. Its location is inferred from the profile shown underneath. Key: a. not excavated; b. recent disturbance; c. ditches of Neolithic barrow; d. Early Iron Age ditch; e. cremation burial; f. ditch in top of barrow (after Verwers 1966, fig. 2).

It is generally thought that older barrows were recognised in the Urnfield period for what they were: the burial monuments of the deceased from a more or less distant past. Even though an attitude of expedience is not ruled out (e.g. burying in an old mound

because it would save the time and labour necessary to raise a new barrow), most authors agree that these old burial sites were chosen again for burial because of the cultural and social meanings that they held. In interpretations of the re-use of ancient monuments, legitimisation is a common theme (cf. Holtorf 1998–2002). In the case of barrows and urnfields this line of argument goes as follows. Barrows and cemeteries symbolise a community's bond with a settlement territory and express the legitimate claim of the group over that territory. If the urnfields in which the ancestors of a community are buried represent a collective ideology of shared ancestors and descent, then establishing a cemetery in the vicinity of an older barrow creates a genealogical line. Mythical ancestors are appropriated in order to add historical depth to the genealogy of the group and strengthen its claim on the territory towards the outside world.

In order to evaluate the hypothesis of legitimisation through appropriation, it is necessary to form an idea of the perception of, and meanings given to, older barrows in the Iron Age. For this we have to start by looking at the archaeological traces of activities that referenced older barrows in the landscape. I will first look in some detail at a handful of cases where there is evidence for Early Iron Age re-use of Late Neolithic to Middle Bronze Age barrows. I have chosen these cases because they offer detailed information, which is often lacking from less extensively excavated and published examples.

Meerlo

This is a complex burial monument with at least four phases dating to the Late Neolithic (Fig. 2; Verwers 1964; 1966). It is situated on the highest part of a ridge of aeolian sands, near a depression. A steep escarpment a little over 200 m to the east drops down about 3 m to the valley of a small stream, the Molenbeek. The diameter of the largest and youngest (or youngest but one) Neolithic ring ditch around the barrow measures over 22 m. There are no indications of interments or other uses of the barrow during the Bronze Age. About 50 m to the south-east, a post circle with a diameter of 7.5 m could represent the remains of a levelled barrow, although no burial was encountered. The type of post circle (single, widely spaced

posts) suggests a Middle Bronze Age date.

Probably during the Early Iron Age, over a millennium after the initial raising of the barrow, a ring ditch about 0.8 m deep and with a diameter of 9 m was dug into the top of the mound. The centre of the barrow was disturbed but the loose backfill did contain the remains of a ceramic vessel and cremated remains. Similar Urnfield period ring ditches in the top of large Late Neolithic to Middle Bronze Age barrows have been encountered several times in the southern Netherlands (Theunissen 1999, 251). Small-scale excavations directly to the north of the Late Neolithic barrow indicate that an urnfield was located adjacent to the barrow. Five cremation burials and two ring ditches, which originally surrounded a small barrow, date to the Early Iron Age. It is impossible to establish a temporal relationship with the ring ditch in the top of the older barrow.

Haps

The excavations at Haps-Kamps Veld yielded a sequence of burial and habitation remains of several phases dating between the Late Neolithic and the Late Iron Age (Fig. 3; Verwers 1972). In contrast to Meerlo and Toterfout-Halve Mijl (below), the site was situated in an arable zone that has been under cultivation since at least the Middle Ages. The result is that the barrows had been levelled long before excavations took place, and only post holes and ditches, as well as burials that had been dug down to a depth greater than the plough-zone were preserved. Any secondary interments higher up in the mounds themselves would have disappeared without a trace. Figures 3B–E show a representative section of the excavated area, with a phasing that differs in some respects from the one proposed by the excavator, hence the somewhat detailed description.

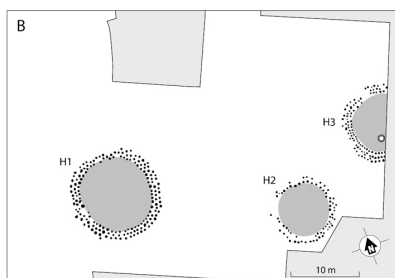
At least seven barrows were raised in the second half of the Middle Bronze Age (three in Figure 3B), with a roughly linear east–west layout. There are no indications that the terrain was used in the Late Bronze Age for dwelling or burying. A double post alignment connects the northern perimeters of barrows H1 and H3, and continues onwards another 15 m to the west. The total length of the alignment is about 60 m (Verwers 1972, pl. 1–2). There is little to date this post alignment, apart from a slight change in

orientation, which suggests that the alignment post-dates barrow H1. At the point where the alignment and the triple post circle of the barrow touch each other, two cremation burials were interred. One of these was placed in an urn of Early Iron Age date, the other yielded no dating evidence. This suggests that the post alignment was standing, or that its place was recognised, when the Early Iron Age burials were made; in other words that the alignment dates to the Early Iron Age or not very long before.

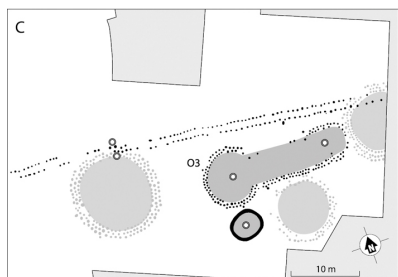
An elongated 'keyhole'-shaped monument O3, surrounded by a double post circle, was raised to the south of the alignment, between barrows H1 and H3. Two cremation burials were placed along the central axis, one in the centre of the circular part and one in an urn at the 'base' of the keyhole. The urn dates from the Early Iron Age. There are no parallels for this monument. Verwers (1972, 22–6) assumes that it dates to the Middle Bronze Age because barrows surrounded by post settings are more common in the Middle Bronze Age than in the Early Iron Age, although well-dated examples of the later period are known. The elongated shape of the monument is closer to the long barrows of the Late Bronze Age and Early Iron Age. Judging by the Early Iron Age burial or burials along the central axis, there is much to be said for assigning this barrow to the Early Iron Age (cf. Theunissen 1999, 67). It is striking how in its location and orientation, the barrow refers to both older barrows H1 and H3. The general east–west orientation in the layout is not only respected but also further emphasised by the post alignment and barrow O3. It is quite possible that there was a path running along the barrows and post alignment.

Presumably somewhat later, but still in the Early Iron Age, the Middle Bronze Age barrow H1 is incorporated in a larger barrow surrounded by a ring ditch (Fig. 3D). No associated burials or other finds that could date this phase of use were recovered. Unlike Verwers, who places this phase in the Middle Bronze Age because of the large diameter of the resulting mound (19 m), I would argue that this incorporation of the older barrow took place in the Early Iron Age, because of the date for the post alignment suggested above. The relative date of the post alignment and secondary barrow cannot be established on stratigraphic grounds, but unless the barrow was levelled shortly after having been raised, the post

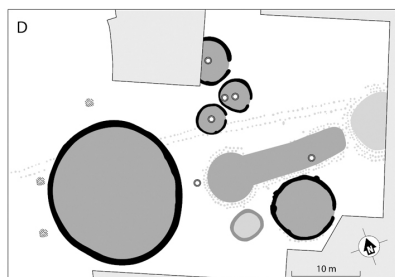
alignment only makes sense if it pre-dates the barrow enlargement. Early Iron Age mounds with diameters of over 15 m are not very common, but there are examples. A parallel of an earlier barrow buried under a larger one of Early Iron Age date, and surrounded by a ring ditch is the famous Hallstatt C 'chieftain's' grave of Oss (Holwerda 1934; Modderman 1964). There, a Middle Bronze Age barrow with a diameter of 16 m was enlarged to 52 m in the Early Iron Age (Jansen and Fokkens 1999, 85–90). Interestingly, at some point between the two construction phases, a double post alignment ran for at least 15 m towards the Middle Bronze Age mound. The Early Iron Age barrow covered part of the alignment, as it did at Haps.



Middle Bronze Age B



post-alignment and earlier Early Iron Age graves



later Early Iron Age graves



Middle or Late Iron Age

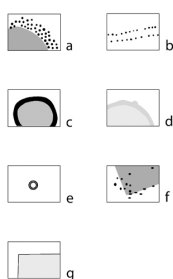


Fig. 3. Haps-Kamps Veld. Sequence of burial and habitation activities in a representative section of the excavated area. Key: a. Bronze Age barrow with post setting; b. double post alignment; c. Early Iron Age grave with ring ditch; d. monument originating in earlier phase; e. cremation burial, with or without urn; f. post holes of farmhouses and four-posters; g. excavated/not excavated (after Verwers 1972).

We are on firmer ground with the dating of the rest of the urnfield that develops at Haps in this phase.

Several urns and the openings in the ring ditches surrounding small (but again, levelled) barrows date these graves to the Early Iron Age. One of these barrows was raised over Middle Bronze Age

barrow H2. With the extension of the cemetery to the north, the strong east–west orientation in the layout is broken, although the overall east–west extent of the cemetery still remains. The latest graves (outside the area depicted in [Figure 3](#)) date from the earlier part of the Middle Iron Age, and are surrounded by rectilinear ditches that are typical of this period. Shortly afterwards, perhaps around 400 BC, the urnfield stops being used as a burial ground. In this, the Haps urnfield follows a general pattern that occurs almost everywhere in the southern Netherlands.

During the Middle Iron Age and the beginning of the Late Iron Age, the area directly to the west of the barrows and urnfield is used intensively for habitation ([Fig. 3E](#)). Over 20 byre-houses represent several farmsteads of which the farmhouses were rebuilt a number of times. There are no indications that the barrows were levelled at this time, although one farmhouse and a four-poster touch on the periphery of an old barrow.

Mierlo-Hout

At this site, a single Middle Bronze Age barrow and an Early Iron Age urnfield were excavated ([Fig. 4](#); Tol 1999). The land was used as arable since the Middle Ages, so the mounds covering the burials had been levelled long before excavation. Recent disturbances, moreover, left several gaps in the urnfield. The large extent of the excavations and the thorough analysis of the dating evidence present interesting observations on the development of the cemetery (Tol 1999, 105). In the course of the Middle Bronze Age a barrow was raised in the vicinity of a depression, and subsequently modified and re-used at least once. There are no indications of habitation or funerary activities during the Late Bronze Age, but in the eighth century BC, at the beginning of the Early Iron Age, an urnfield was founded in the vicinity. Interestingly, the oldest graves of the urnfield occur in a zone 100–150 m to the south of the Middle Bronze Age barrow. Until the sixth century BC, the urnfield graves clustered in this southern zone, and only then expanded northwards towards and around the older barrow. The youngest graves in the urnfield date to the fifth century BC (Middle Iron Age) and are located about 75 m to the east of the barrow. After 450 BC the urnfield fell into disuse.

There are reasons to believe that the urnfield was deliberately placed at a distance from the Middle Bronze Age barrow, rather than that the barrow was not recognised as such. The barrow was left alone but not ignored. If we assume that Mierlo-Hout is similar to other urnfields where the earliest graves were of more monumental scale than the later graves (cf. Roymans and Kortlang 1999, 48–53), then the five most impressive graves, all located in the oldest part of the cemetery, represent the original core. Four of them, one long barrow, one post circle with ring ditch, a post circle and a ring ditch lie along a north–south line, while the fifth lies a little back from it. On analogy with other urnfields in the Netherlands (Kooi 1979, esp. 163; Verlinde 1985, 388), one can postulate a path along this line (Fig. 4). This path would have taken someone following it close to the western side of the Middle Bronze Age barrow. As at Haps, then, the older monument appears to have been referenced by incorporating it in the infrastructure of the settlement territory, and here too the path was later blocked by urnfield graves.

Toterfout-Halve Mijl

Among the monuments in this famous barrow landscape is a partly excavated urnfield as well as one or more apparently isolated Urnfield period burial monuments (Fig. 5; Glasbergen 1954a, 82–3; 95–7). The 35 or so barrows represent intermittent funerary use of the area between the Early Bronze Age and the end of the Middle Bronze Age (Theunissen 1993). The barrows extend over an elongated zone of about 2 km, with several concentrations and also relatively empty zones. The western (outside the area shown on the map) and central clusters are separated from an eastern cluster by a small stream. The eastern cluster is small but consists of barrows that are among the largest and oldest in the whole barrow landscape, including Early Bronze Age tumulus 2 and *ringwalheuvels* 1 and 1B (‘Dutch disc barrows’ in Glasbergen’s terminology). Glasbergen reconstructs a prehistoric route running in an east–west line along all three clusters, crossing the stream near tumuli 3 and 1B (Glasbergen 1954b, 174, fig. 76).

It is this area, bordering the stream valley, which was chosen as the location for the urnfield. The exposed part of this cemetery (ten

ring ditches) dates to the Early Iron Age, judging from the ring ditches with openings around most graves, and the scarce pottery finds. In his discussion of the urnfield, Glasbergen suggests that a ring ditch within the annexe of Middle Bronze Age barrow 1B represents an Urnfield period re-use of the barrow, and that tumulus 1A which yielded no finds and had a ring ditch, could also date from the Urnfield period (1954a, 97).

It is striking that after a period without evidence for habitation or funerary activity during the Late Bronze Age, this oldest section of the barrow group was chosen as the site of an Early Iron Age cemetery. Was it the monumentality of these graves that attracted people? Was it the location near the stream valley – which meant that these would be the first monuments encountered after crossing the stream and coming back up onto the higher coversand plateau – that affected the choice of location?

Patterns and representativity

An immediately striking feature of the examples which have just been discussed is the diversity of ways in which older barrows were re-used or referenced. To summarise, the following forms can be observed:

1. burial at the foot of an older barrow;
2. burial in the top of an older barrow, with or without a ring ditch around the top;
3. burial in or on an older barrow, whereby the old monument becomes part of a new mound and is sometimes completely incorporated within the new mound;
4. burial in the direct vicinity of an older barrow;
5. creating lines of orientation between old and new grave monuments, through post alignments or other means;
6. connecting graves with older barrows by establishing a path between or along both.



Fig. 4. Mierlo-Hout. Part of Early and Middle Iron Age urnfield with Middle Bronze Age barrow, showing reconstructed path between oldest core of urnfield and older barrow. Key: a. burial monument; b. Middle Bronze Age barrow and monuments of oldest core urnfield; c. Middle Iron Age farmhouse; d. disturbed; e. excavated/not excavated; f. depression; g. reconstructed boundaries of urnfield; h. possible Iron Age path (after Tol 1999, loose-leaf plan).

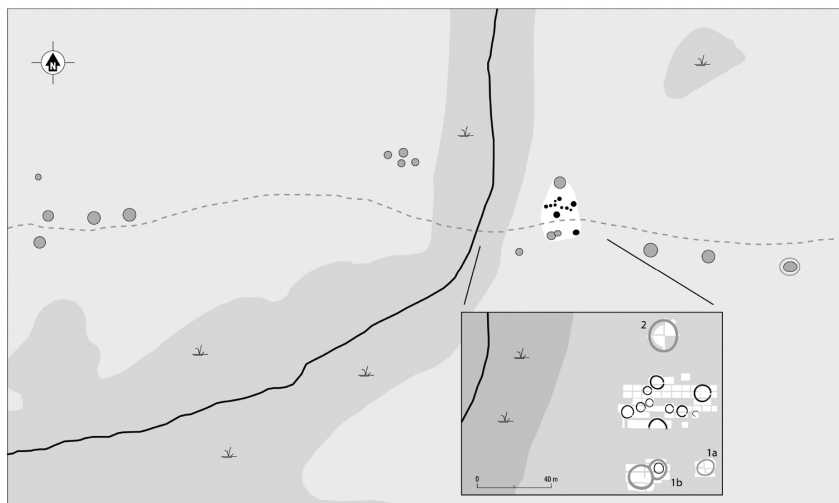


Fig. 5. Toterfout-Halve Mijl. Central and eastern clusters of barrows, showing partially excavated Early Iron Age urnfield in cluster of older barrows on the east side of a small stream and reconstructed path (after Glasbergen 1954a, fig. 3, fig. 40; 1954b, fig. 76).

Table 1 lists the published examples of burials from the southern Netherlands (including Late Bronze Age cases) which re-use and reference older barrows, in order to give an idea of the relative frequencies with which these patterns have been observed. There are no clear examples of types of referencing different from the six forms mentioned here, but given the complexity of the patterns demonstrated by the well-investigated examples, this list is probably far from exhaustive.

It remains an open question to what degree Table 1 reflects the relative frequencies with which these patterns occurred in prehistory. Similarly, the question of how common the association between Late Neolithic and Early and Middle Bronze Age barrows with Urnfield period cemeteries was, can only be answered very tentatively. For too many urnfields we lack the information to establish whether and how they related to older barrow monuments. If we look at the handful of urnfields that were completely or almost completely excavated, then of the five that qualify, three were established in areas where there are no traces of earlier barrows: Beegden (Roymans 1999), Someren (Kortlang 1999) and Weert-Raak (Tol 1998). The other two, Haps and Mierlo-

Hout (see above), were established near older monuments. Most Middle Bronze Age barrows were excavated as isolated features, so that there can be little doubt that nearby Urnfield period graves were frequently missed. But there are also barrows that, in spite of relatively extensive excavations around the mound, did not yield evidence for Urnfield period graves (E. Theunissen pers. comm.). This prompts the conclusion that the phenomenon of reusing and referencing older barrows in the Urnfield period was common, certainly more common than can be demonstrated with factual evidence, but not ubiquitous.

In addition, it should be mentioned that there is no Urnfield period evidence for the levelling of older barrows. It is difficult to establish for prehistoric grave monuments covered by medieval or later anthropogenic *Plaggen*-soils when the initial levelling took place, but features such as post holes, pits, granaries, farmhouses or later burials often provide a *terminus ante quem*. As I will discuss below, there are Middle Bronze Age barrows and sections of urnfield cemeteries that were built over by Late Iron Age farmyards, but there are no examples of Bronze Age barrows that were treated in such a way in the Urnfield period.

Practices of barrow re-use and Urnfield period burial rituals

It is a relevant question whether there is, within the full spectrum of Urnfield period burial rituals, a significant difference between the ways in which Middle Bronze Age and older barrows were confronted and the ways in which earlier Urnfield period graves were treated. The diversity of ways in which older barrows were referenced is perhaps not surprising if one realises that there is also considerable variation within Urnfield period burial customs. This concerns the shape and size of monuments, and the treatment of the cremated remains, as well as the treatment of older Urnfield period graves. Given the fact that many urnfields show continuous use for periods of two centuries or more, burying a dead person in the community's urnfield must always have involved (with the exception of the moment of foundation) a confrontation with older graves. This is an element of urnfield burial ritual that must have been of fundamental importance: 'urnfields are in fact the result of a

long-term preference of burying the dead in the immediate surroundings of the ancestors' (Fontijn 1996, 81). In this respect, therefore, burying the dead near Middle Bronze Age and older barrows only differs from the practice of burying near the grave monuments of the community in the amount of time passed in between.

There are other areas of overlap. Interring the cremated remains in a pre-existing barrow is not only common before the Urnfield period but continues throughout the Early Iron Age. In most urnfields the majority of interments were covered by an individual mound (leaving aside the apparently moundless urnfields that occur mostly in Belgium), but there is always a minority not buried under a mound or placed secondarily within an existing mound (also in the northern Netherlands: Kooi 1979, 134). It is also not uncommon for ring ditches to intersect or for the mounds in an urnfield partly to overlap, comparable to the incorporation of older barrows in Urnfield period grave monuments. There is, however, considerable variation in this respect between urnfields. All this suggests that the forms of interaction with older barrows did not differ greatly from the forms of burial that were part of the Urnfield period burial customs.

Non-funerary ways of referencing older barrows

There are indications that, in addition to the re-use of older barrows in funerary contexts, they played a role in other realms. The spatial association with older barrows of Late Bronze Age and Iron Age 'Celtic' fields observed in the northern and central Netherlands implies this. Well-known examples come from Hijken (Harsema 1991; Bradley 2002, 70–2) and the Noordse Veld near Zeijen in the north (Van Giffen 1949; 1950; Waterbolk 1977a), and Vaassen in the central Netherlands (Brongers 1972).

At the Noordse Veld, the banks of the 'Celtic' fields are orientated in such a way that they lie parallel and perpendicular to a line formed by three Middle Bronze Age barrows (Fig. 6). These barrows form the western edge of this part of the 'Celtic' field system. Waterbolk (1977b, 166) has proposed that a major prehistoric north–south route ran directly west of the barrows and 'Celtic' fields. Interestingly, there was a double post alignment running

from Barrow 75 for a length of 35 m towards Barrow 111, parallel to the presumed route. This is reminiscent of the situation described above at Haps. There is no dating evidence for the post alignment, but if the posts were raised at same time as the barrows, it is unlikely that the alignment would still have been standing when the nearby ‘Celtic’ fields were laid out. But in any case, the main axis of orientation created by the barrows determined the orientation of the field system. We clearly have a case whereby older barrows were referenced in the context of the agricultural use of the land. If nothing else, this underscores the point that the historicised landscape played a much broader role in the lives of Early Iron Age communities than in the realm of burial and ancestors. To date, this association of barrows with ‘Celtic’ fields has not been observed in the southern Netherlands, but this may well be due more to the lack of research on ‘Celtic’ fields there, than to a real absence of the association in prehistory.

<i>Name of urnfield</i>	<i>Observed forms of re-use (numbers according to list in text)</i>
Alphen-Keutelberg	4
Bergeijk-Hoge Berkt	4
Berghem-Zevenbergen	2, 4
Goirle-Hoogeind	4
Hapert/Eersel (mun. boundary)	4
Haps-Kamps Veld	1, 3, 4, 5, 6
Helden-Koningslust	4
Hogeloon-Honshoef/Zwartenberg	2, 4
Hoogeloon-Kattenberg	4
Hoogeloon-Hoogpoort	4
Hoogeloon (E. boundary of mun.)	4
Knegsel-Huismeer	3, 4, 5
Knegsel-Knegselse Heide	3
Meerlo	2, 4
Mierlo-Hout	4, 5, 6
Neer-Boshei	4
Nijmegen-Kops Plateau	1, 3, 4, 5, 6
Nijmegen-Hunerberg	1, 4
Nuenen-Haneven	4
Oss-Vorstengraf	3, 4
Riethoven-Boshoven	1, 4
Toterfout-Halve Mijl	2, 4, 6

Table 1. Urnfields in the southern Netherlands that re-use and reference older barrows

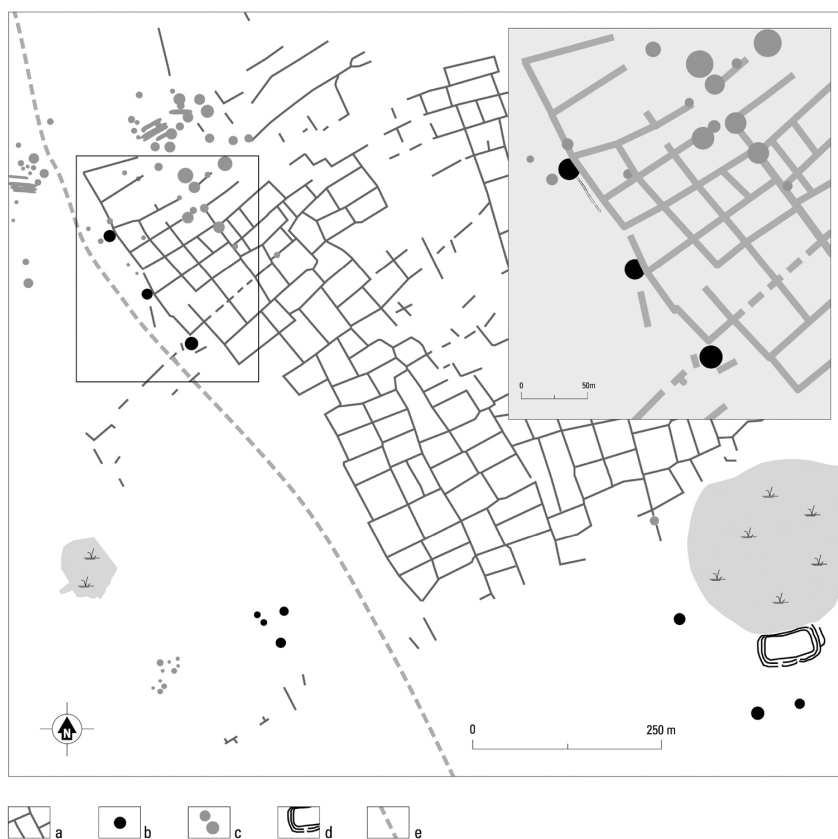


Fig. 6. Noordse Veld near Zeijen (Drenthe). 'Celtic' field laid out along line of older barrows and post alignment. Key: a. banks of 'Celtic' field; b. barrow pre-dating the 'Celtic' field; c. burial monuments contemporary with or post-dating the 'Celtic' field; d. Late Iron Age enclosure; e. reconstructed road (after Van Giffen 1949, fig. 10; 1950, [fig. 1](#); Waterbolk 1977a, [fig. 1](#)).

It is striking that there is no evidence from the southern Netherlands that Urnfield period farmsteads were situated in the vicinity of pre-Urnfield period barrows. Perhaps not too much can be made of this, because of the relatively small number of excavated Late Bronze Age and Early Iron Age period farmhouses (less than 50 published examples; Gerritsen 2003, 45). But it

tentatively suggests that this pattern reflects a practice of avoidance of old barrows by individual households.

Urnfields in the post-Urnfield period

After urnfields were given up for burial, they themselves became elements from the past. The landscape of the Middle and Late Iron Age was one littered with monumental but disused cemeteries. The fact that people no longer buried their dead in collective cemeteries but in small, short-lived and much less monumental clusters of graves indicates that fundamental aspects of the symbolic construction of local communities had changed. As I have suggested elsewhere, in the course of the Middle and Late Iron Age there appears to be a transition from local communities defined tightly as burial communities to local communities defined more loosely as groups based on local cult practices and particularly on farmstead clusters with fixed locations (Gerritsen 2003, 244–8). These forms of identity constructions probably reflect major changes in the social landscape of the southern Netherlands.

The pervasiveness of the social and cultural changes in the second half of the first millennium BC is also demonstrated by changes in the forms of re-use of older funerary sites. There is almost no evidence for the funerary re-use of Late Bronze Age and Iron Age urnfields until the Roman period. This is particularly striking in cases where there is evidence for habitation in the near vicinity of an urnfield, as is the case in Someren in the Middle and Late Iron Age (Kortlang 1999). The Someren urnfield was discontinued around 400–375 BC, whereas the settlement continued well into the Late Iron Age (250–1 BC). Apart from three flat graves that possibly date to the Late Iron Age, there is nothing to suggest where these later inhabitants buried their dead. In other words, people lived quite close to a large and monumental cemetery from an earlier age, they saw and passed by it on a daily basis, but, as far as we can tell, they chose *not* to act on that fact.

The final phase distinguished at Haps (Fig. 3E) saw the reorganisation of space and the use of the peripheries of the urnfield as farmyard space. It is not exactly clear how much time elapsed between the final use of the location for burial and the first house construction, but judging from the house types and general dates for

the Haps settlement (c. 400–200 BC; Van den Broeke 1985), it would probably not have been more than two centuries. There are further examples of urnfields that were turned into settlement space in the Late Iron Age or the early Roman period, including Hilvarenbeek-Laaq Spul (Fig. 7; Verwers 1975) and Weert-Raak (Tol 1998).

The patterns indicate that, whereas funerary forms of re-use of older burial monuments come to a halt, non-funerary ways of referencing older cemeteries continue and take on new forms after the Urnfield period. The fact that urnfields were incorporated in and built over by farmsteads may indicate disrespect, or that ancient burial sites were no longer sacred. Alternatively, it may be that the social context of referencing had shifted from that of the local community to the individual family group and its farmstead.

Many of the collective cemeteries of the Roman period were founded in the direct vicinity of urnfields (Roymans 1995, appendix 1), signalling a new phase of appropriation of ancient monuments in the context of the burial rituals of local communities.

Appropriation and familiarisation

Until now, I have used the terms ‘re-use’ and ‘referencing’ to describe the forms in which people related to earlier burial monuments. These terms say nothing about the underlying reasons, although by using them I do imply intentionality: the archaeological data are not the result of Iron Age activities that coincidentally took place in the vicinity of older barrows. The forms that the reusing and referencing took, often elaborate and labour-intensive, further indicate that expedience was not the main underlying reason. In order to understand what the underlying reasons were, it is useful to see the practices described above as forms of appropriation. Older burial monuments were appropriated: they were incorporated in the realm of the contemporary, known and socialised world of a local group. This conclusion raises new questions. In which social contexts were they appropriated? At what moments during the period of use of an urnfield were older barrows appropriated? And, why were they appropriated, what were the intended effects?

If the contexts in which the referencing of older barrows can be observed archaeologically give an indication of the social contexts

in which they played a role in the Early Iron Age, then two areas have been recognised: funerary practices and the realm of agricultural land use. I would suggest that these are contexts in which the local community played an important role, rather than individual family groups and households. Significantly, there are no examples to date of referencing of older barrows in household-related contexts such as the farmstead. This suggests that we need to understand the appropriation of older barrows in the context of the collective ideology of local communities. As explained above, I would argue that the landscape plays an important role in this, as shared feelings of belonging to the land and shared activities at particular localities in the landscape are some of the fundamental aspects of the collective identity of a community.

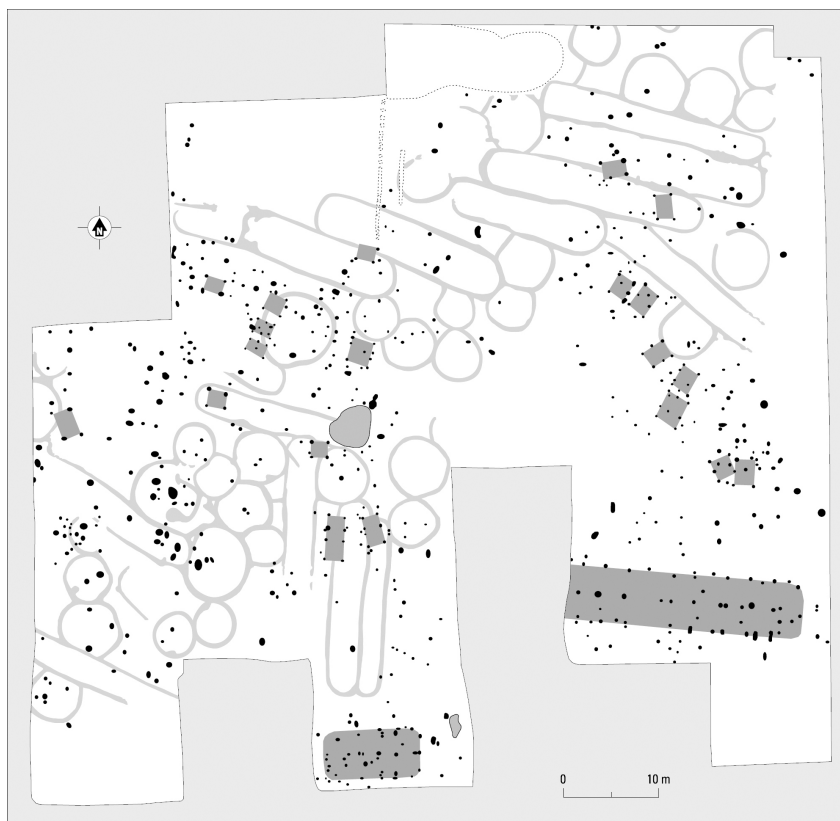


Fig. 7. Hilvarenbeek-Laaq Spul. Middle and Late Iron Age farmhouses and settlement remains adjacent to and overlying Late Bronze Age urnfield (after

Verwers 1975, fig. 9 and appendix).

The urnfields discussed above were founded and used by local communities that established themselves in the course of the Early Iron Age. In this period a much greater number of local communities than before defined themselves as such, and the foundation of a collective urnfield would have been an important element in the initial construction of a shared identity and bond with the landscape and settlement territory. If the currently common interpretation that older barrows were appropriated strategically to legitimise claims to land is correct, one would expect the incorporation of an older barrow to take place at the time of a community's and cemetery's foundation. That is a time when claims to land are most likely to be challenged by outsiders.

The archaeological evidence shows that the re-use of older barrows did not only take place in the earliest stages of the development of an urnfield. At Mierlo-Hout, the oldest graves were seen to keep a certain distance from the Middle Bronze Age barrow, even though they may have been aligned on the same path. This spatial separation apparently lost significance only after a century or more. The famous 'chieftain's' tumulus at Oss is another example. Renewed investigations at the site demonstrated that this mound completely covered a Middle Bronze Age mound (Jansen and Fokkens 1999, 85–90). Another important discovery was that the tumulus was situated within an urnfield, and that it was not the earliest grave monument. The Middle Bronze Age mound may well have been appropriated in other ways before the Hallstatt C tumulus covered it – in fact, there is evidence for a double post alignment not unlike the one at Haps post-dating the Middle Bronze Age mound and pre-dating the large tumulus. But the old barrow apparently retained certain qualities after the foundation of the urnfield, that influenced the decision to cover it with a much larger mound in the Hallstatt C period. The sequence of burial activities at Haps suggested above indicates that there, too, the re-use of barrows was not restricted to the earliest phase of the urnfield.

Apparently, the appropriation of barrows did not only take place in the context of the foundation of an urnfield and the initial expression of claims over a settlement territory. This suggests that the idea of legitimisation through appropriation is perhaps one-sided.

I will return to this below.

So far, I have skirted around the question of how older barrows were perceived by Early Iron Age communities. In order to discuss the reasons why older barrows may have been appropriated, it is necessary to try and come to grips with this question. The archaeological data allow us to infer first that older barrows were recognised in the Early Iron Age for what they were, the burial monuments of ancient inhabitants of the area; and second that they were treated in varied ways but generally with respect. This suggests that they were not imbued with purely negative meanings, as we see for example in the Middle Ages (cf. Roymans 1995 on the diabolisation of urnfields and barrows).

I want to suggest further that Middle Bronze Age and older barrows held ambiguous meanings in the Early Iron Age. On the one hand they were recognisable, they could be understood in the basic idiom of the Urnfield period burial rituals. But on the other hand, they were remnants from a distant, unknown past. Barrows predating the Early Iron Age urnfields by at least three centuries would not automatically be part of the familiar past.

This combination of familiar and unfamiliar aspects may have placed older barrows in an ambiguous category. As explained above, the Early Iron Age was a period in which many new communities established themselves and the landscape filled up with settlement territories. Partly, this would have been a matter of splitting up larger territories, but it would also have involved moving into areas with little or no habitation in the immediately preceding period. Particularly in these 'new' areas, the presence of ancient barrows would have testified to earlier, unknown inhabitants, and this may also have given the barrows an ambiguous and perhaps even dangerous quality. In this sense, landscape elements from a distant past may show parallels to objects from a distant past or exotic place of origin. David Fontijn recently showed that exotic bronze objects in the Bronze Age of the southern Netherlands were treated and perceived differently from locally made objects, presumably as a result of their association with places, people and customs that were potentially dangerous and could not be controlled (Fontijn 2002, 231–7; 244–6; 278–9).

Did the re-use of older barrows result, then, from a desire to

control an unknown and potentially dangerous past? I think there is something to be said in favour of this suggestion, particularly in the light of the case made above about the importance of the landscape in the construction of the collective identity of a community. It is likely that people associated older barrows with previous inhabitants and therefore with *their* relationships with, and claims over, the landscape. Within a settlement territory of a local community whose collective identity was linked with the landscape it inhabited, there was no room for such unfamiliar, ambiguous elements. Such elements could perhaps have been ignored when they were situated in the margins of the inhabited and cultivated zones, but they had to be confronted where they lay within those zones.

In this sense, the appropriation of older barrows may have been just as much a way of making statements to outsiders who needed to be convinced of the ancestral and legitimate rights of the community to the territory, as for the benefit of the local group. Such 'statements' for the members of a local community may have served to re-enculturate ambiguous elements in the landscape, and also perhaps – by drawing these into the realm of the collective cemetery – to remove them from a realm where individual families could make use of their power. Most importantly, appropriating older barrows served to *familiarise* the landscape and the past.

The discussion has moved gradually away from the archaeological patterns. Is there any support in the data for this claim that older barrows were appropriated in order to familiarise the past and the landscape? I think support can be found by looking again at the different ways in which older barrows were referenced.

The common practice of burial in the vicinity of older barrows may, as many have suggested, have created genealogical ties with the dead associated with the original phase of use. This created a line of descent with a mythical ancestor, which would not only have extended the pedigree of the living, but would also have turned an unknown being into a known ancestor: a member of the community. Perhaps the formal similarities in the burial rituals also helped to emphasise the connections and de-emphasise the unfamiliar aspects.

The situation may be different in those cases where an older

barrow was fully incorporated in a new mound. As archaeologists we tend to focus on remembering, and on the construction and transmission of memories. We pay less attention to forgetting, perhaps because intentional forgetting is a paradox. But there is something to be said for interpreting radical changes as a strategy of forgetting what was there before. In the cases where Early Iron Age mounds completely covered a smaller Middle Bronze Age mound (e.g. Haps and Oss-Vorstengraf), we should consider the possibility that this was intended to negate the meanings of the older mounds. This then is not so much a form of familiarising the barrow by incorporation in an urnfield, but a form of familiarising the landscape by replacing what was there before.

To infer a strategy of familiarisation that may have been much more common than we can see in the current evidence, it is necessary to take the wider layout of the cemetery and surrounding areas into account. In several instances we have seen how old barrows and urnfields were connected by lines of orientation and probably by pathways. Paths would not have run from the one to the other and no further; they would have gone on and people would have moved along them. Where did they go? Most movement would have been within the settlement territory, between dispersed farmsteads, between houses and fields, watering places, grazing grounds. In this daily traffic people would pass the urnfield as well as older barrows innumerable times, and in doing so, they would draw older barrows into the familiar landscape of daily life. Moreover, funerary processions taking the dead to their place of burial would probably have used the same paths.

Conclusion

One role of archaeology in society today is to familiarise the past. We can only understand ancient world views and the practices and materials that they shaped by reference to our own frameworks of thinking. In a similar way, people in the past confronted with an unfamiliar past would be challenged to familiarise it, to incorporate it into their contemporary world.

In this paper I have suggested that the appropriation of older burial monuments during the Urnfield period was done in multiple ways and to attain multiple goals. In addition to the legitimization of

claims to land, I propose that the appropriation of older monuments may have served to deal with their unfamiliar, ambiguous aspects. This ambiguity would have been potentially threatening to the ideology of the local community dwelling in a familiar, claimed and enculturated landscape. Several Urnfield period strategies of appropriation can be distinguished, often occurring together at one site: (1) referencing older barrows by burying in their vicinity, i.e. turning an unknown dead person into an ancestor with links to the local group; (2) fully incorporating older barrows into new mounds, perhaps to replace their meanings by new ones; and (3) incorporating older barrows in the network of lines of orientation and movement. Further, there are indications that such appropriation did not only take place during the foundation phase of a local community and its cemetery, but could also occur at later stages, and could be repeated time and again.

Seen from a long-term perspective, the appropriation of ancient monuments is a remarkably widespread and recurring phenomenon. But studied within a shorter timeframe, it is equally remarkable for its variety, both in terms of the forms which re-use could take and in terms of the intended goals.

Acknowledgements

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Note

1. This list also includes 82 urnfields for which no dating evidence is recorded.

Bibliography

Alcock, S.E. 2002. *Archaeologies of the Greek Past. Landscape, Monuments and Memories*. Cambridge: Cambridge University Press.

- Bradley, R. 2002. *The Past in Prehistoric Societies*. London: Routledge.
- Bradley, R. and Williams, H. (eds) 1998. *The Past in the Past. The Re-use of Ancient Monuments*. London: World Archaeology 30.
- Brongers, J.A. 1972. *Vaassen. Een akkercomplex uit de ijzertijd*. Bussum: Unieboek, Archeologische monumenten in Nederland 3.
- Cohen, A.P. 1985. *The Symbolic Construction of Community*. London: Tavistock.
- De Hingh, A. 2000. *Food Production and Food Procurement in the Bronze Age and Early Iron Age (2000 BC–500 BC)*. Leiden: Archaeological Studies Leiden University 7.
- Fontijn, D. 1996. Socializing landscape. Second thoughts about the cultural biography of urnfields, *Archaeological Dialogues* 3, 77–87.
- Fontijn, D. 2002. *Sacrificial Landscapes. Cultural Biographies of Persons, Objects and 'Natural' Places in the Bronze Age of the southern Netherlands, c. 2300–600 BC*. Leiden: *Analecta Praehistorica Leidensia* 33/34.
- Fontijn, D. and Cuijpers A.G.F.M. 2002. Revisiting barrows. A Middle Bronze Age burial group at the Kops Plateau, Nijmegen, *Berichten van de Rijksdienst voor het Oudheidkundig Bodemonderzoek* 45, 157–189.
- Gerritsen, F.A. 1999. To build and to abandon. The cultural biography of late prehistoric houses and farmsteads in the southern Netherlands, *Archaeological Dialogues* 6, 78–114.
- Gerritsen, F.A. 2003. *Local Identities. Landscape and community in the late prehistoric Meuse–Demer–Scheldt region*. Amsterdam: Amsterdam Archaeological Studies 9.
- Gerritsen, F.A. 2004. Archaeological perspectives on local communities, in J. Bintliff (ed.), *A Companion to Archaeology*, 141–154. Oxford: Blackwell.
- Glasbergen, W. 1954a. Barrow excavations in the Eight Beatitudes. The Bronze Age Cemetery between Toterfout and Halve Mijl, North Brabant I. The excavations, *Palaeohistoria* 2, 1–134.
- Glasbergen, W. 1954b. Barrow excavations in the Eight Beatitudes. The Bronze Age Cemetery between Toterfout and Halve Mijl, North Brabant II. The implications, *Palaeohistoria* 3, 1–204.
- Harsema, O.H. 1991. De bronstijd-bewoning op het Hijkerveld bij Hijken, in H. Fokkens and N. Roymans (eds), *Nederzettingen uit de bronstijd en de vroege ijzertijd in de Lage Landen*, 21–29. Amersfoort: Nederlandse Archeologische Rapporten 13.
- Hendrix, W. and Schaap, J. 1995. Een IJzertijdcomplex nabij Nattenhoven, gemeente Stein, *Archeologie in Limburg* 63, 7–12.
- Holtorf, C. 1998–2002. *Monumental Past. The life-histories of megalithic monuments in Mecklenburg-Vorpommern (Germany)*, <http://>

citdpress.uts.utoronto.ca/holtorf (consulted March 2003).

- Holwerda, J.H. 1934. Een vroeg Gallisch Vorstengraf bij Oss (N. Br.), *Oudheidkundige Mededelingen van het Rijksmuseum van Oudheden te Leiden* 15, 39–53.
- Ingold, T. 1993. The temporality of the landscape, *World Archaeology* 25, 152–174.
- Jansen, R. and Fokkens, H. 1999. *Bouwen aan het verleden. 25 jaar archeologisch onderzoek in de gemeente Oss*. Leiden: Faculty of Archaeology.
- Kooi, P.B. 1979. *Pre-Roman Urnfields in the North of the Netherlands*. Groningen: Wolters Noordhoff.
- Kooi, P.B. 1995–6. Het Project Peelo. Het onderzoek van het Kleuvenveld (1983, 1984), het burchtterrein (1980) en het Nijland (1980) met enige kanttekeningen bij de resultaten van het project, *Palaeohistoria* 37/38, 417–479.
- Kortlang, F. 1999. The Iron Age urnfield and settlement from Someren-‘Waterdael’, in Theuws and Roymans 1999, 133–198.
- Lohof, E. 1994. Tradition and change. Burial practices in the Late Neolithic and Bronze Age in the North-Eastern Netherlands, *Archaeological Dialogues* 1, 98–118.
- Meinig, D.W. 1979. The beholding eye: ten versions of the same scene, in D.W. Meinig (ed.), *The Interpretation of Ordinary Landscapes*, 33–48. Oxford: Oxford University Press.
- Modderman, P.J.R. 1964. The chieftain’s grave of Oss reconsidered, *Bulletin van de vereniging tot bevordering der kennis van de antieke beschaving* 39, 57–62.
- Roymans, N. 1995. The cultural biography of urnfields and the long-term history of a mythical landscape, *Archaeological Dialogues* 2, 2–38.
- Roymans, N. 1999. The Early Iron Age urnfield of Beegden, in Theuws and Roymans 1999, 63–86.
- Roymans, N. and Gerritsen, F. 2002. Landscape, ecology and mentalités. A long-term perspective on developments in the Meuse–Demer–Scheldt region, *Proceedings of the Prehistoric Society* 68, 257–287.
- Roymans, N. and Kortlang, F. 1999. Urnfield symbolism, ancestors and the land in the Lower Rhine Region, in Theuws and Roymans 1999, 33–62.
- Schut, P., Kars, H. and Wevers, J. 1987. Jade axes in the Netherlands, a preliminary report, *Helinium* 27, 71–87.
- Theunissen, E.M. 1993. Once again Toterfout-Halve Mijl. An attempt to demonstrate vertical stratification in the burial evidence of a Bronze Age cemetery, *Analecta Praehistorica Leidensia* 26, 29–43.
- Theunissen, E.M. 1999. *Midden-bronstijdsamenlevingen in het zuiden van de*

- Lage Landen. Een evaluatie van het begrip 'Hilversum-cultuur'.* Unpublished Ph.D. thesis, University of Leiden.
- Theuws, F. and Roymans, N. (eds) 1999. *Land and Ancestors. Cultural dynamics in the Urnfield period and the Middle Ages in the southern Netherlands.* Amsterdam: Amsterdam Archaeological Studies 4.
- Tol, A. 1998. De bewoningsgeschiedenis van Kampershoek, in N. Roymans, A. Tol. and H. Hiddink (eds), *Opgravingen in Kampershoek en de Molenakker te Weert. Campagne 1996–1998*, 7–35. Amsterdam: Zuidnederlandse Archeologische Rapporten 5.
- Tol, A. 1999. Urnfield and settlement traces from the Iron Age at Mierlo-Hout, in Theuws and Roymans 1999, 87–132.
- Van den Broeke, P.W. 1985. Het handgemaakte aardewerk van de opgraving Oss-Ussen, *Archon jaarverslag over 1985*, 34–41.
- Van Dyke, R.M. and Alcock S.E. (eds) 2003. *Archaeologies of Memory.* Oxford: Blackwell.
- Van Giffen, A.E. 1949. Oudheidkundige aantekeningen over Drentse vondsten (16), *Nieuwe Drentse Volksalmanak* 67, 93–148.
- Van Giffen, A.E. 1950. Oudheidkundige aantekeningen over Drentse vondsten (17), *Nieuwe Drentse Volksalmanak* 68, 89–124.
- Verlinde, A.D. 1985. Die Gräber und Grabfunder der späten Bronzezeit und frühen Eisenzeit in Overijssel, IV, *Berichten van de Rijksdienst voor het Oudheidkundig Bodemonderzoek* 35, 231–411.
- Verwers, G.J. 1964. A Veluvian Bell Beaker with remains of a cremation in a tumulus near Meerlo, *Analecta Praehistorica Leidensia* 1, 17–24.
- Verwers, G.J. 1966. A tumulus and an urnfield at Meerlo, prov. Limburg, *Analecta Praehistorica Leidensia* 2, 6–8.
- Verwers, G.J. 1969. The beginning of the Late Bronze Age in the Lower Rhine area, *Berichten van de Rijksdienst voor het Oudheidkundig Bodemonderzoek* 19, 17–25.
- Verwers, G.J. 1972. *Das Kamps Veld in Haps in Neolithikum, Bronzezeit und Eisenzeit.* Leiden: Analecta Praehistorica Leidensia 5.
- Verwers, G.J. 1975. Urnenveld en nederzetting te Laag Spul, gem. Hilvarenbeek, *Analecta Praehistorica Leidensia* 8, 23–43.
- Waterbolk, H.T. 1962. Hauptzüge der eisenzeitliche Besiedlung der nördlichen Niederlande, *Offa* 19, 9–46.
- Waterbolk, H.T. 1977a. Opgravingen rond het Witteveen op het Noordse Veld bij Zeijen, gem. Vries (1949–1953), *Nieuwe Drentse Volksalmanak* 94, 177–203.
- Waterbolk, H.T. 1977b. Walled enclosures of the Iron Age in the north of the Netherlands, *Palaeohistoria* 19, 97–172.
- Williams, H. 2003. *Archaeologies of Remembrance. Death and Memory in Past*

Societies. New York: Plenum.

The emergence of Early Iron Age ‘chieftains’ graves’ in the southern Netherlands: reconsidering transformations in burial and depositional practices

David Fontijn and Harry Fokkens

Introduction

The transition from the Bronze Age to the Iron Age in European regions is often understood as involving significant transformations of the social order (Kristiansen 2000, 210). This is not only the prevailing view for the well-known central European Hallstatt culture but also for the more peripheral areas that will be central to the present discussion, the southern Netherlands and north Belgium. In spite of their marginal position, these areas are known for their relatively wealthy Hallstatt C burials, including some of the richest ones outside the Hallstatt core region (Fig. 1; Pare 1992, 142, fig. 101a). For the Netherlands, the unusually rich Early Iron Age Hallstatt C ‘chieftains’ graves’ – as they are conventionally called – of Oss and Wijchen have always been considered to symbolise profound social change. In size, the Oss barrow surpasses all earlier and contemporary burial monuments by far. The rich funerary assemblages include a number of special non-local items from the western Hallstatt region, like a Mindelheim sword with gold inlay (Oss); a large bronze vessel and bucket; parts of a four-wheeled wagon with lavishly decorated bronze linch pins (Wijchen); and horse gear. Such items are in striking contrast to the modest grave goods of both earlier and contemporary burials.

The problem: the shift from river to burial deposition as a

break with age-old traditions

What we are dealing with is, first and foremost, a transformation of the burial ritual, in which the construction of truly monumental barrows became possible after a long phase in which burial had a more or less ‘egalitarian’ outlook (Roymans 1991, 19). Second – and this is less often realised – we are also facing a transformation in the attitude towards valuables and the construction of personal identities in burial contexts. The fact that in the Hallstatt C period some individuals were lavishly equipped with prestigious valuables and weapons (swords) is in our region a pronounced break with age-old Bronze Age traditions. Weapons and other paraphernalia of martial – and often elite – identities were circulating and used in the southern Netherlands from as early as the sixteenth century BC (Fontijn 2002, chapter 11). Such items, however, almost never ended up in burials, but were placed in rivers and marshes. Bronze Age burial ritual, it would seem, was rigidly governed by some sort of ‘taboo’ on the deposition of weaponry. Phrased more specifically, the deceased was preferably not portrayed and shaped in his warrior identity, although the ample evidence of weapons in other contexts demonstrates that such martial identities were a feature of Bronze Age society (*ibid.*).

This centuries-old tradition of placing weaponry and valuables in watery places, and of *not* depositing them in burials seems to cease all of a sudden in the Hallstatt C period (800–625 BC), when there is a quite abrupt shift from river to burial deposition (Roymans 1991). It is this remarkable breaking up of long-established traditions in burial and depositional practices which fascinates us, and which will be central to the present investigation. Given the profound stability in cultural attitudes towards weaponry and other martial paraphernalia in the Bronze Age, how could such a decisive break in tradition become socially and culturally acceptable? It is important to realise that we are dealing here with a change in attitude towards the paraphernalia of a martial elite identity, by definition a rare kind of personhood, reserved for only a tiny fraction of the community. The way people dealt with such warrior identities, however, changed in more or less the same way throughout the region. This indicates that the shift from river to burial deposition was rooted in widely shared cultural ideas on the

proper way to treat the paraphernalia of martial elite identities.

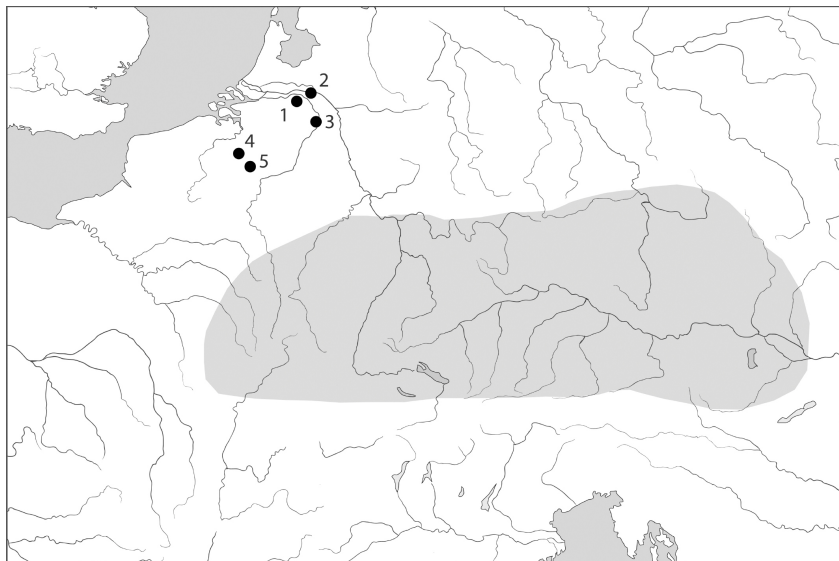


Fig. 1. The main distribution area of wagon graves and Hallstatt C horse gear in relation to isolated sites with the same material in the Rhine–Scheldt area: 1. Oss; 2. Wijchen; 3. Meerlo; 4. Morimoin; 5. Court-Saint-Etienne (after Pare 1992, fig. 101a–d, 134, 135).

Shifts from hoard to burial deposition are not unique to the southern Netherlands, nor are they exclusively a phenomenon of the Early Iron Age. Existing interpretations usually see such a transformation in ritual practices as a shift from one arena in which prestige goods were ‘conspicuously consumed’ to another one (Kristiansen 1989; Roymans 1991; Hedeager 1992, chapter 2; Vandkilde 1996). Usually, it is explained by socio-political processes, particularly by the emergence of new elites seeking new contexts to establish and legitimise their power (Hedeager 1992, 81). Although we do not deny the significance of such processes, it is our view that if we want to make sense of a break in ritual traditions, we should be more concerned with the cultural ideas and values which structured it. Our argument will be that the seemingly rapid shift in depositional and burial practices which took place at the Bronze Age–Iron Age transition is in fact the culmination of a number of different long-term developments in burial and depositional practices which began much earlier. By delineating

these developments, we wish to show how this pivotal change in the cultural attitude to the construction of warriorhood in burials is, in a way, more apparent than real. Nor was it probably as abrupt as it may seem. Nevertheless, in spite of the continuities involved, we will also argue that the ideology of Early Iron Age Hallstatt C warrior burials signals some entirely new ideas in the conceptualisation of martial and chiefly identities.

Development of the argument and introduction to the study area

In this paper, we shall begin by sketching the theoretical background to our study, and go on to discuss some elementary characteristics and developments in the nature of settlement and in the social structure of Bronze

Age and Iron Age societies. Then, significant long-term developments in burial practices and in the practice of depositing valuables in watery places will be considered, leading to a more general discussion in which we will bring together long-term developments in both fields and seek to relate them to historical developments in the socio-political realm. Given the stability of depositional practices during the previous Bronze Age, why was it during the Early Iron Age that things changed?

As a research region, we have chosen the southern Netherlands (Fig. 2) as it is here that we find the lavish Hallstatt C ‘chieftains’ graves’. Such graves are absent from the western and northern parts of the Netherlands, and it is only much further to the south, in southern Belgium, that we find another concentration of such special graves (such as those from Morimoine and Court-Saint-Étienne; cf. Fig. 1). The southern Netherlands are suitable for our study as depositional and burial practices, as well as settlements are comparatively well documented (Roymans 1991; Roymans and Kortlang 1999; Fokkens and Jansen 2002a; Fontijn 2002; Gerritsen 2003). The time period considered runs from the Middle Bronze Age until the end of the Hallstatt C period (1800–625 BC). Crucial phases are the last stage of our Late Bronze Age, contemporary to Hallstatt B2/3 and *Bronze final IIIb* (925–800 BC), and the first part of the Dutch Early Iron Age, contemporary to Hallstatt C (800–625 BC; both date ranges based on Lanting and Van der Plicht 2001–2).

Several scholars have recently recognised a brief early phase of Hallstatt C, labelled either the ‘Gündlingen phase’ (Pare 1991; Roymans 1991, 20–1, [fig. 5](#)) or the ‘Wehringen phase’ (Friedrich and Hennig 1996).

Theoretical background: understanding ‘prestige’ metalwork as meaningful items

If we want to make sense of depositional practices and the ideas that shaped them, then we should be more concerned with what the objects and their deliberate deposition meant to the communities in question. The observation that deposition was selective and structured may serve as a clue for our interpretation. The fact that weapons were so rigidly kept away from burials in the Bronze Age implies that there must have been some general understanding of the meaning of both weapons and funerary practices that ensured the two were kept separate.

If we discuss ‘meanings’ in this context, then we must be dealing with collective meanings, part of a *mentalité* that was current in the region as a whole. The fact that metalwork figured in a system of *selective* deposition makes it clear that we are dealing with items that are not just ‘things’, but rather carry highly specific meanings. A study of depositional practices carried out by one of us shows that such meanings must have come about after a specific life-path or cultural biography: most deposited items show traces of an intensive life of use and circulation (Fontijn 2002, 212).

With regard to objects that ended up in hoards, we seem to be dealing with items that followed a specific life-path. For the Bronze Age, a primary distinction can be made between two kinds of valuables: those associated with the construction of personal identities (weapons and specific ornaments) and items the meaning of which is more in the field of communal identities (Fontijn 2002, 218). (Work) axes and ceremonial items seem to be part of this second category. It is important to note that the term ‘personal identities’ concerns something other than ‘status’ and ‘prestige’. Significantly, ‘chiefly’ warrior identities were shaped in a stereotyped manner. They are not just about bearing arms, but also about wearing specific ornaments and probably even about specific bodily adornment (the repetitive presence of razors and tweezers in

warrior outfits for example suggest this; Treherne 1995). Apart from the notion that such a warrior outfit was probably prestigious, this shows that the construction of such an identity was based on specific cultural principles concerning the way in which objects and costumes construct a specific kind of warriorhood.

If we now want to study the transformation in depositional practices which took place during the transition to the Early Iron Age, we should ask ourselves precisely what changed in the ideas concerning the construction of personal identities in burials, as well as try to make sense of the fact that depositing valuables in watery places apparently lost its original significance.

Bronze and Iron Age societies: the world of settlement and daily life, c. 1800–600 BC

Some long-term characteristics

After an enormous time-span in which agriculture and cattle breeding was complementary to the hunter-forager way of life, it was somewhere in the first centuries of the Middle Bronze Age that we see for the first time the emergence of a fully agrarian mixed farming subsistence strategy (Fokkens 1999; Louwe Kooijmans 1998). A mixed farming strategy with a marked emphasis on cattle breeding and herding is characteristic of the southern Netherlands, at least for the Holocene central river area and the Pleistocene sandy soils. This comes particularly to the fore in the house type itself, which from the Middle Bronze Age is always a longhouse, in which people and cattle lived under the same roof. From the predominance of cattle in the animal bone assemblages (e.g. Louwe Kooijmans 1998, 332) and from the very fact that longhouses came into being, it can be deduced that cattle formed a core element in Bronze Age local communities of the Low Countries, not only economically, but socially as well (Fokkens 1999; Roymans 1996, 54).

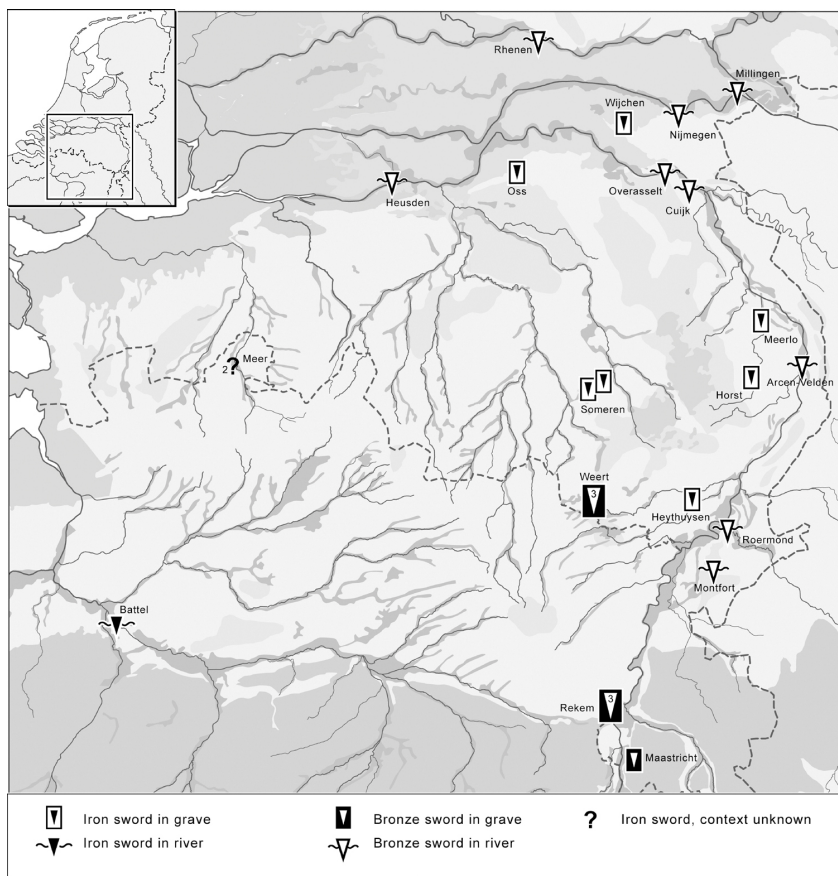


Fig. 2. The study area: the southern Netherlands and the northern part of Belgium, showing findspots of Early Iron Age bronze and iron swords (source: Fontijn 2002, fig. 8.15).

Another *longue durée* characteristic concerns the dynamics of settlement. In fact, the ‘settlement’ is something of a misnomer, as it has actually proved extremely difficult to define with respect to the Netherlands and to the lowlands of north-west Europe in general. The reason for this is that settlements appear to be ephemeral and dispersed. Clusters of houses, something one would expect when we use the term settlement, are absent from most regions. Instead we seem to be dealing with dispersed solitary farmsteads that probably existed for one generation only and were then abandoned (Gerritsen 2003). A new farm was then built on another location, which can be either nearby, or a few hundred metres away. This peculiar pattern

of settlement dynamics has been termed the pattern of ‘wandering farmsteads’ (Schinkel 1998). It is not until some centuries after the period under study here, around 250 BC, that clustered (and ditched) settlements first came into being. This applies not only to the Netherlands, but also, for instance, to Denmark (Schinkel 1998; Webley 2002; Gerritsen 2003).

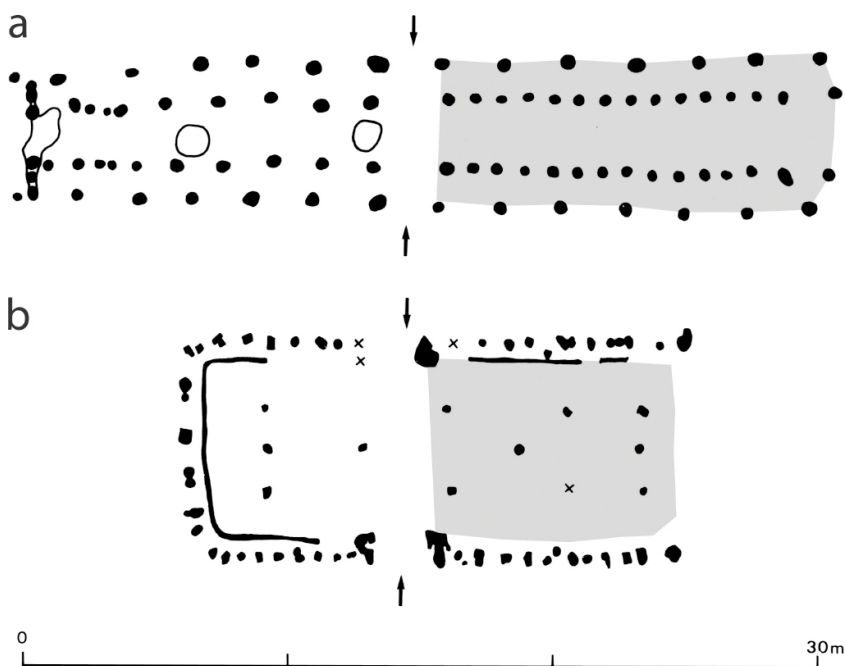


Fig. 3. Examples of two houses: a. a Bronze Age house from Elp; and b. an Iron Age house from Oss, showing that both the stable and living area of the latter are shorter. The stable area is indicated in grey.

If houses are not clustered, it is difficult to determine the size of community that considered itself a community: a group of people living in each other's proximity, helping each other out, for example when building houses, cultivating arable land, herding cattle, or harvesting, and sharing the same burial grounds and cult places. Co-residence is an important element in the definition of communities, but as Gerritsen (2003, 109–17) has shown, it is first and foremost about a feeling of shared identity. To emphasise these social dimensions of settlement we have started to use the concept of *local*

community (Fokkens 1996; Gerritsen 2003). For the later part of the Bronze Age, one – or at the most two – large three-aisled buildings seem to have constituted such a local community (c. 1800–900 BC). In terms of numbers, we must be dealing with about 15–25 people (Fokkens 1997): the farms are so large (25–30 m long) that they easily could have housed extended families. As mentioned before, they probably housed not only people, but 20 to 30 cattle as well: true longhouses (Fokkens 2003). For the later part of the period under study (from c. 900 BC onwards), settlement research has shown that the number of houses was somewhat larger (three to six; Kooi 1979, 174; Verlinde 1985, 324; Gerritsen 2003), but the size of the group itself was not.

The transition to smaller houses and households and the adoption of the Celtic field system

This brings us to an important change that took place during the period under study. Over time, the length of houses decreased considerably, from c. 30 m or longer, to between 12–20 m (Fig. 3; Fokkens 1997, 364–6, fig. 4). This development cannot be precisely dated but it must have started *after* the Middle Bronze Age and was complete *before* the Early Iron Age. Houses dating to c. 1100–900 BC are practically absent in the southern Netherlands. For the Early Iron Age, houses are again known in considerable numbers, but remarkably enough these are much smaller. The large Bronze Age longhouse apparently disappeared to make way for a house that could only have housed a smaller group of people and a smaller number of cattle (*ibid.*). This development seems to have taken place over almost the entire region in which the rectangular longhouse was common (*ibid.*; Blouet *et al.* 1992; Kristiansen 2000, fig. 168). As one of us has noted, this development may indicate that the size of the household, and with this the social structure of the community itself, changed as well (Fokkens 1997). It might therefore be ventured that the decrease in house size from the Middle Bronze Age to the Iron Age indicates that household size decreased to a smaller group than the extended family. It seems reasonable to think of a unit the size of a nuclear family (Fokkens 1997, 367; Kristiansen 2000, 306).

Another important transformation of the settlement system during

the period under discussion is the emergence of ‘Celtic’ fields (Müller-Wille 1965; De Hingh 2000, 32–4). They can be defined as a group of roughly rectangular plots of arable land of more or less equal size divided by – in general – low banks several metres wide. Although the origin of these field systems was originally placed around 500 BC (Brongers 1976), it has since become clear that Celtic field agriculture can be traced back at least to the Late Bronze Age, and probably came to full development in the Early Iron Age (Fokkens 1998, 119; Gerritsen 2003, 167). The adoption of Celtic field agriculture implies that some social and economic changes took place.

For the present discussion, it is the possible social implications that we particularly need to consider. It has been argued that the Celtic field system demanded a higher level of collective regulation than the small dispersed plots of arable land of the Middle Bronze Age (Roymans and Kortlang 1999, 51; De Hingh 2000). According to De Hingh, it is hard to see what this means in terms of tenure, but it is probable that the arable plots were no longer ‘privately’ owned by one household, but instead shared by the entire local community. Another implication may be that the adoption of Celtic fields also signals a greater concern with territoriality and with claims to the land.

The expansion of settlement territories and the origins of an open, cultivated landscape

The developments sketched above took place against the background of a landscape that became increasingly cultivated and open. Pollen evidence and the fact that barrows were, from now on, made from heather sods, indicates that from the beginning of the Middle Bronze Age, considerable deforestation took place (Van Beurden 2002). By the Early Iron Age, heaths existed in some places, as De Kort (2002) showed for the area surrounding the chieftain’s barrow at Oss. Consequently, these activities must have further exacerbated the processes of soil degradation and podsolization (Roymans and Gerritsen 2002).

In a paper of great interest, Roymans and Kortlang (1999) have argued that the Late Bronze Age was a period which witnessed sharp demographic growth. In the foundation of new cemeteries,

they see a reflection of ‘filling up’ the landscape by new territorial groups (*ibid.*, 38–9, note 15). However, if we confront this idea with the argument made above on the large extended families who split up into smaller social units during the Late Bronze Age, an alternative explanation presents itself, which does not necessarily involve an abrupt demographic rise. The evidence for Late Bronze Age settlements is, in fact, extremely poor when compared to the previous period. In large parts of the river area, in which recent surveys and large-scale excavations have yielded large numbers of Middle Bronze Age settlement sites, traces of the Late Bronze Age are almost entirely lacking.

It is not until the Early Iron Age that settlements became visible in the southern Netherlands, and this time in high numbers. This is not only the case in the river area, but in the southern Netherlands as a whole. This trend is mirrored by a sharp increase in the number of urnfields, some of which are situated in areas that had seen no previous inhabitation (Roymans and Gerritsen 2002). In addition, the Early Iron Age is also the period in which people started to live in the peat marshes near the coast for the first time (Van Heeringen 1992). In our view, it therefore seems likely that the Early Iron Age indeed represents a period in which true settlement expansion took place.

Funerary practices: stability and change

The long threads of continuity that mark the history of settlement in our region are also true for funerary practices. Different as they may seem at first sight, the Hallstatt C chieftains’ graves are firmly rooted in a longstanding tradition of burial ritual. We will now discuss the long-term characteristics of funerary practices in our region, and consider the changes which took place therein. Our point will be that the emergence of the impressive individual Hallstatt C chieftains’ burials can be seen as a culmination of developments that had already been under way for a long period. At the same time, however, we wish to show that some of these burials also represent a sense of ‘otherness’ and difference that was unknown in existing burial practices.

Long-term characteristics

The most striking long-term characteristic of the burial ritual in our region from c. 2600 BC is the interment of the deceased individual underneath a small mound, or in a flat grave (Lohof 1994, 112). In the southern Netherlands, both inhumation and cremation were practised side by side, but with a growing preference for cremation throughout the Middle Bronze Age (Fig. 4; Theunissen 1999, 84–5). This reached a peak in the Late Bronze Age, when cremation became virtually the exclusive way to treat the body. Only in the Early Iron Age is there again some evidence for inhumation graves, but these are clearly exceptions (Van den Broeke 2003). In other European regions, cremation was hardly practised before the Late Bronze Age, and its introduction as part of the Urnfield burial ritual is therefore often thought to herald a ‘spiritual revolution’ and a ‘very marked reorientation of beliefs in Bronze Age society’ (Harding 1994, 318; 321). There is no evidence that anything similar happened in the southern Netherlands.

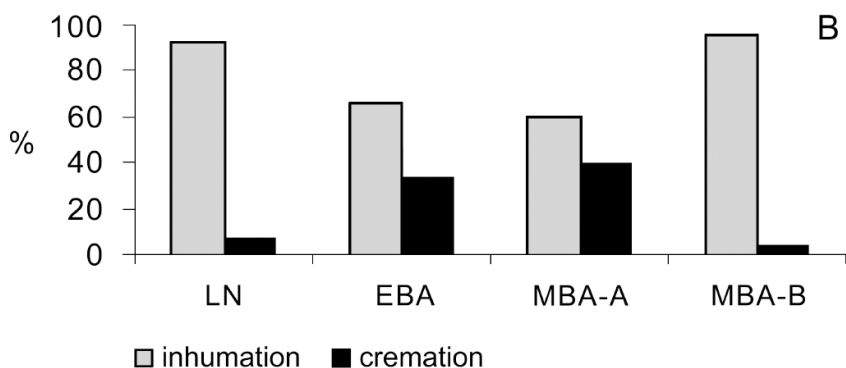
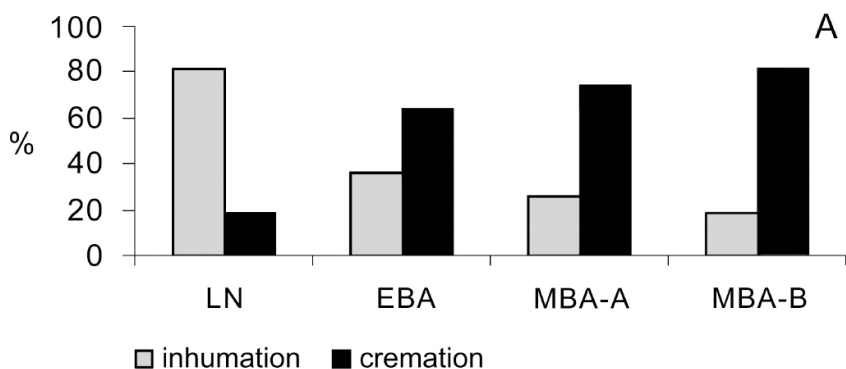


Fig. 4. The preference for inhumation and cremation from the Late Neolithic to the Middle Bronze Age in the southern (A) and northern (B) parts of the Netherlands. Note that in the north, which was part of the Nordic world, the subsequent transition to the Late Bronze Age represents a much sharper break than in the Atlantic south where cremation was already the dominant tradition (sources: Lohof 1991; Theunissen 1999).

The way in which the deceased was portrayed by the mourners before the moment of final interment is noteworthy. We know that from the start of the Middle Bronze Age metalwork was circulating in some quantity, but hardly any of these valuables entered the grave. Although they must have served as paraphernalia of specific personal identities (ornaments and weaponry), such valuables were apparently not considered to be part of the construction of the personal identities of the deceased.

Interestingly, such personal sets are known throughout the Bronze Age, yet they do not come from graves but from hoards (Fontijn 2002, chapter 11). The absence of martial paraphernalia (weapons and ornaments that are elsewhere typical of warrior graves) is particularly striking, since they are so abundantly known from marsh and river finds. It follows that martial identities were apparently not emphasised in the kind of burials we know: Middle Bronze Age barrows and flat graves, and Late Bronze Age urnfields, in spite of the fact that the burial record is comparatively well-known. Burial ritual seems to have been governed by some sort of taboo on themes associated with warfare and martiality.

The same applies to ornaments that are outspokenly affiliated to supra-regional styles. Lavish, possibly female, dress items, related to the north French Plainseau tradition of the Late Bronze Age, occur in some numbers in hoards, but are almost entirely absent from cemeteries. A recent investigation of grave gifts from burials, however, makes it clear that ornaments and dress items were occasionally used in the construction of a specific kind of personhood, both on the pyre and after cremation (Fontijn 2002, chapter 9). These, however, are generally either simple non-bronze objects made in a local style, or simple, more general bronze items, the meaning of which differs from urnfield to urnfield. One of us has therefore argued that in the imagery of the deceased there was a marked emphasis on the construction of local, as opposed to

supra-regional, identities. The dead were displayed first and foremost as members of his or her local group; there are hardly any references to the reality that some of them also participated in supra-regional bronze exchange networks, and wore costumes and paraphernalia which emphasised this (warrior and some female outfits; Fontijn 2002, chapters 11 and 12).

Developments through time: a growing inclusiveness of the barrow rite

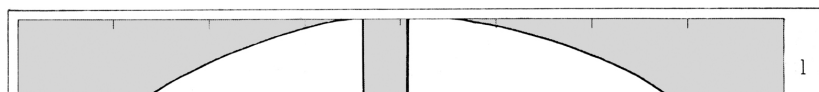
Most of the known burials are those with a small mound. In the Middle Bronze Age, it is clear that not every member of the local community was interred in a barrow (Theunissen 1993). There is a growing body of evidence to indicate that there were alternative ways to bury the dead (flat graves, interment of disarticulated human bones in settlements; Theunissen 1999, 73–4). Interments in barrows are simply the aspect of the burial ritual that is best known archaeologically. For that reason, it is better to speak of developments in the *barrow* ritual, and bear in mind that in the Middle Bronze Age there were alternative practices as well.

It is significant, however, that it was this barrow ritual that became increasingly practised throughout the Middle Bronze Age. Whilst Late Neolithic and Early Bronze Age barrows were still very rare, probably constructed once within several generations, those of the Middle Bronze Age were already much more numerous and clearly constructed at shorter time intervals (Lohof 1994, 102; Theunissen 1999, 85–6). Also, the number of people who were secondarily interred in a barrow increased (*ibid.*, table 3.12). On top of that, there was a broadening in the categories of people who were selected for interment in a barrow. Whereas the barrow ritual was initially focused on central interments of adult males in the Late Neolithic and Early Bronze Age, from Middle Bronze Age A females and children were increasingly buried in barrows, both secondarily and primarily (*ibid.*, 96–98; Fontijn and Cuijpers 2002). It is also significant that throughout the Middle Bronze Age barrow burials became increasingly collective, constructed as foci for the interment of later generations (Theunissen 1999, 85–6). The barrow, then, became some sort of cemetery in itself (Fig. 5).

Parallel to this development we see the emergence of entire

barrow landscapes: zones in the land, covered with barrows (Fontijn 1996, 78). The concentrations sometimes became clustered to such an extent that we might rightfully speak of 'barrow cemeteries', as for example at Toterfout-Halve Mijl (Theunissen 1993). Still, there is no evidence that every member of society was buried here: the collectivity displayed in the Middle Bronze Age B barrows seems to be primarily of a symbolic nature (Fontijn and Cuijpers 2002, 173–5; 177). Still, the gradual appropriation of this burial ritual by more people than before is a sign that its original social meaning was changing (Lohof 1991, 271).

This development culminated in the Late Bronze Age, when 'true' cemeteries came into being for the first time (Fokkens 1997; Gerritsen 2003). The existing tendency to cluster graves in each other's vicinity intensified to such a degree that extensive clusters of graves now emerged at one locality: the urnfields. Within such a cemetery, the barrows themselves were usually smaller than those of earlier periods and they were no longer the collective graves that Middle Bronze Age barrows had been. Most of the dead were buried under an individual burial monument, or in a flat grave. Another change concerns the inclusiveness of the burial rite. Within the urnfields, we find far more graves than in barrow cemeteries of the Middle Bronze Age. All categories of people seem to have been buried there, ranging from very young children to elders. Several authors have argued that urnfield cemeteries represent a situation in which most, if not all, members of a local group were interred in one and the same cemetery in an archaeologically visible manner (Fokkens 1997, 363; Gerritsen 2003).



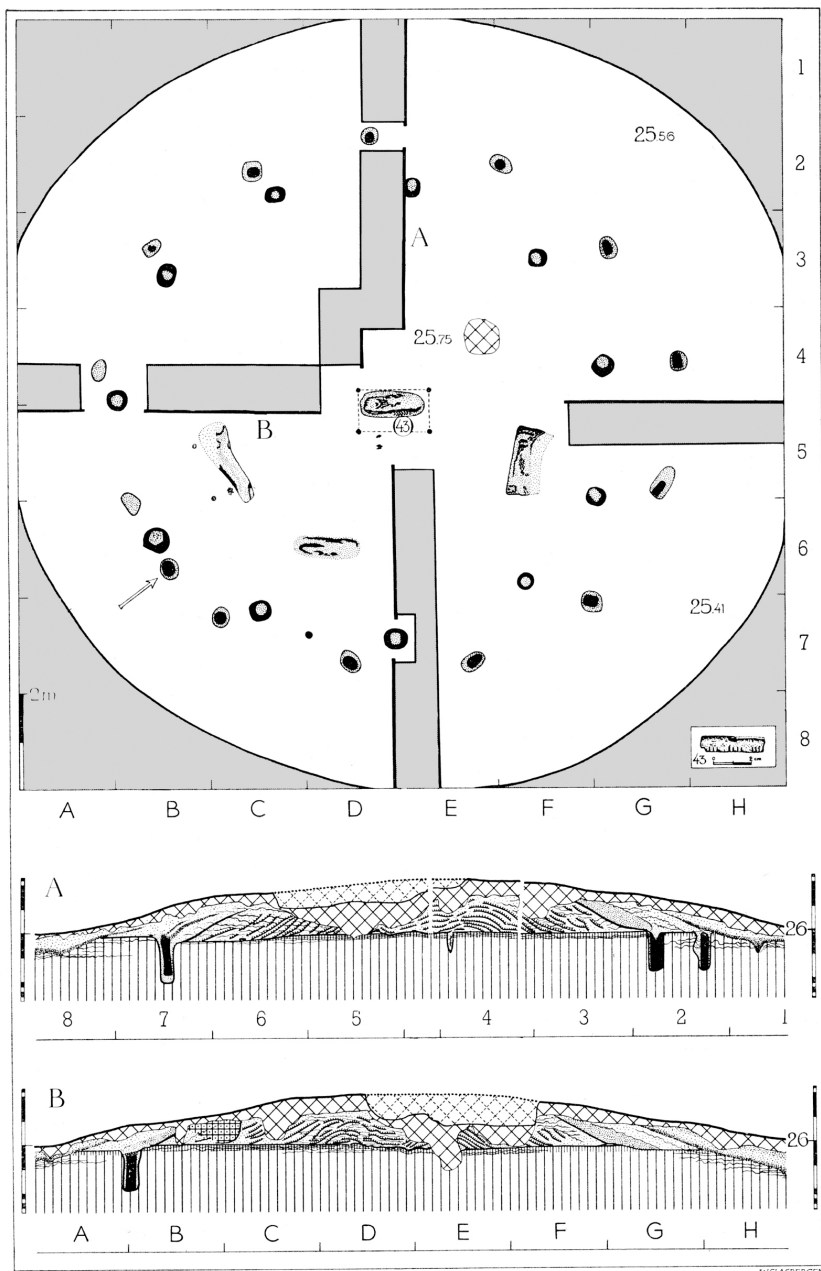


Fig. 5. Two-period Middle Bronze Age barrow (no. 5) excavated by Glasbergen at Toterfout-Halve Mijl. The primary grave was surrounded by a small four-post building or scaffold which was removed before the barrow was erected. The double post-circles represent two barrow periods; there are at least three

secondary burials, others may have been lost because the barrow was heavily damaged by poachers trying to catch a badger (after Glasbergen 1954, 44; fig. 13).

From Late Bronze Age to Early Iron Age urnfields

Once they were founded, urnfields remained in use for burial for a very long time. Many urnfields that originate in the Late Bronze Age continued to be used during the Early Iron Age. In spite of this continuity, the actual burial ritual underwent some significant changes. In general, Late Bronze Age urnfields have an egalitarian outlook. There is some variety in grave form, but as this is true of most urnfields, it must reflect very general divisions in society (Roymans 1991, 19). In some cases, the layout of urnfields echoes the formal division of primary and secondary interments characteristic of Middle Bronze Age B, but these subsequently give way to a more egalitarian layout in the Late Bronze Age (Fontijn 1996, 79).



Fig. 6. The barrow at Oss and surrounding burial monuments as re-excavated in 1997–2002 by the University of Leiden. Nothing remained of the barrow but the shallow ditch (5), 53 m in diameter surrounding the original barrow with its burial pit (1). The Early Iron Age barrow proved to be built on top of a much earlier Bronze Age barrow with a ring ditch of 16 m in diameter (2). Underneath the barrow a double post alignment was found (3), probably dating to the Middle or Late Bronze Age. Other Early Iron Age urnfield barrows and cremation graves without mounds were found around it. The site was severely

disturbed by modern pits and trenches (Fokkens and Jansen 2004).

In the Late Bronze Age urnfields, graves that are much more monumental or wealthy than others appear to be absent. The emphasis seems to be on the burial community as a collective whole in which each individual member has its place, both people recently deceased and their distant forebears (Roymans and Kortlang 1999, 53). It is this aspect of burial ritual that underwent gradual changes. In the Early Iron Age, there are clear signs of hierarchisation of the urnfield burial rite. For the first time, monuments that were much more conspicuous than others were constructed: the long barrows of Someren type (length 145 m) and circular mounds, of which the chieftain's barrow at Oss is the largest example (diameter 53 m; Fig. 6).

The 'otherness' of Hallstatt C warrior graves

It is in the large circular mounds that we tend to find graves with Hallstatt C weaponry, horse gear, bronze vessels and wagon parts. That such graves were constructed indicates that the burial ritual had lost its egalitarian nature. But there is more: Hallstatt C burial equipment, in all its variety, heralds some entirely new elements. In the first place, they refer to a supra-regional, non-local personal imagery, which is in contrast to the existing emphasis on creating local identities in burials. Second, they signal themes of a highly specific kind of elite ideology that was not native to our region. This can be inferred from the deposition of parts of ceremonial wagons; the reference to driving that is symbolised in the deposition of horse gear; and the presence of large bronze vessels (perhaps referring to drinking bouts; see Diepeveen-Jansen 2001, 39–44; 47–51; this volume). Such items are all unprecedented in the existing burial rite. Elements that characterised *Bronze Age* warrior appearances (sword–spear combinations, toilet articles, body ornaments) no longer seem to play a role. Third, the very fact that weaponry was deposited in burials is – as we have already noted – significant, because the avoidance of martial themes was one of the long-term characteristics of the burial ritual.

We should emphasise that the introduction of these new and unprecedented elements were contextualised in burial rites that

were in other aspects native and unchanged. The deceased individuals were cremated, and the *pars pro toto* attitude towards grave goods, so characteristic of the urnfield burial ritual in our region, applies to the novel items as well. Only parts of wagons and horse gear were deposited (Fontijn 2002, 203–4). Also, some of the bronze vessels were used as the container for the cremation, which is not normally the case in central Europe, although Roymans argues that – at least at Wijchen – the bronze vessel must have been deposited for its own sake (Roymans 1991, 59–61).

Deposition of valuables in watery places

Before we attempt to bring together these different elements, one last field of practice remains to be discussed: the deposition of valuables in watery places, and how this changes over time. During the Bronze Age, enormous amounts of metalwork must have circulated across Europe, as occasional finds of shipwrecks full of bronzes, and estimates of the production from mining areas demonstrate (Huth 2003, 48–9). Still, the majority of this metal must have been recycled or reworked. Most of the material that did enter the archaeological record comprises items that were deliberately deposited. So, the metalwork that comes down to us in fact reflects highly specific cultural biographies: those ending up in a deliberate act of object sacrifice.

A recent survey of the metalwork from the southern Netherlands (Fontijn 2002, chapter 15) makes it clear that Bronze Age metalwork deposition in this region had the following general characteristics. First of all, there was a pronounced preference for depositing items in uncultivated, watery places. As we have seen, bronzes only rarely ended up in burials, but the same is true of dry places and settlements. Relatively speaking, only in the Late Bronze Age are bronze items known from burials in any quantity. However, it is usually only a small minority of the graves in an urnfield that contains bronzes. Investigation of 19 urnfields shows that the frequency varies from 0 to 19% (Fontijn 2002, 198, fig. 9.1). The items deposited are also of a very different nature and have been treated differently from those found in watery places; most are incomplete and/or burnt. Bronzes from watery places, however, are generally complete and undamaged. Swords, spears and axes from

marshes and rivers were often resharpened and made ready for use.

As already noted, another feature that sets burial and wet contexts apart concerns the selection of objects. Weapons (swords and spears) are entirely lacking from burials, but prevail in watery places (Fig. 2 above). Next, it is noteworthy that a large proportion of the items that ended up in such places show the traces of use. The life-path thus seems to have been vital, and it may be suspected that items that were selected for deposition in wet places are items which had accumulated meaning in the course of a long use-life (Fontijn 2002, 217).

The depositional practices were not random, but highly selective. Apart from the conspicuous absence of weapons in graves, there is a division between local, simple ornaments (found in burials), and lavish supra-regionally-styled items (found in hoards and rivers). The absence of weapons and axes from well-preserved settlement sites is equally striking. Recent research has shown that Middle Bronze Age settlement sites were sometimes the focus of deliberate deposition, although the items placed there were mainly very simple tools, most notably sickles (Fontijn 2002, 144–7). The attitude towards swords is again quite selective. There seems to have been a strong preference to deposit swords in rivers, whereas they hardly ever occur in inland marshes or stream valleys – in which axes and spears *were* deposited – not even in marshes situated close to a river. The entire system of deposition thus seems to be based on a widely shared understanding that particular kinds of objects had specific cultural biographies culminating in particular types of deposition.

Equally relevant to the present discussion are the indications that weaponry was often part of complete martial outfits including specific ornaments (Fontijn 2002, chapter 11). Weapons were probably valuables with which specific, often chiefly, identities were constructed. The recurrent presence of weapons and entire warrior outfits in watery places indicates that such valuables were, after some time, apparently given up, along with the martial identity they represent. Warrior identities therefore seem to have been temporary ones, probably associated with specific stages in the personal life cycle (Fontijn 2002, 230, fig. 11.3). It might be ventured that weapons and martial ideas were to some extent

considered ambiguous. At any rate they had no place in the construction of personal identities in the grave or on the pyre. This might be because their associations with the sphere of conflict and competition were at odds with ideas that were significant in the burial rite, notably the pronounced emphasis on collectivity and coherence of the burial community that comes to the fore in later Middle Bronze Age barrows and Late Bronze Age urnfields (Roymans and Kortlang 1999; Fontijn and Cuijpers 2002).

The characteristics of selective deposition as described above did not fundamentally alter from the start of the Middle Bronze Age until the last century of the Late Bronze Age (i.e. the Hallstatt B2–3/ Bronze final IIIb phase). As [Figure 7](#) shows, the rate of deposition did, however, increase through time. Estimates of the rate at which bronzes were deposited range from one event somewhere in the region every ten years for the Late Neolithic–Early Bronze Age to almost one deposition a year for the Late Bronze Age (Fontijn 2002, 214–5).

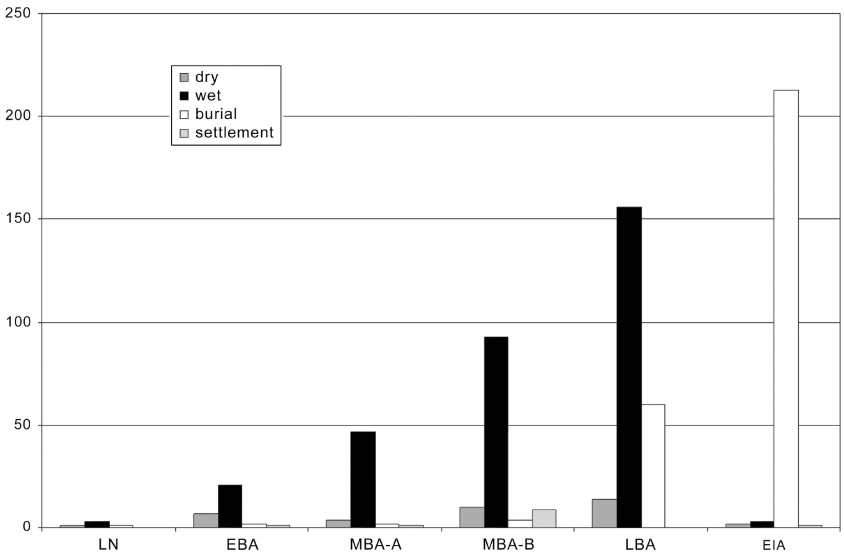


Fig. 7. Frequency of object deposition in different types of context in the southern Netherlands through time. Multiple-object hoards count as one deposition (source: Fontijn 2002, fig. 10.3).

Changes at the end of the Bronze Age

There are indications that depositional practices underwent

significant changes in the two following periods: Hallstatt B2–3/ Bronze final IIIB, and the subsequent Gündlingen/Wehringen phase of Hallstatt C. Although the practice did not disappear entirely, it can be argued that some of its essential characteristics gradually became more and more devoid of meaning.

First of all, in the Late Bronze Age depositions became much more lavish. Multiple object hoards had always been exceptional, single deposits the rule. Although this remained so for the Late Bronze Age, this is the first time that unprecedentedly high numbers of multiple-object depositions are known. This development reached its peak in the last century of the Late Bronze Age, when deposits could involve dozens of objects (e.g. Heppeneert, containing some 47 axes; Van Impe 1994). The very fact that axes were now deposited *en masse* implies either that more people than before were involved in axe deposition, or that the significance of *individual* items diminished.

Next, there is a new development in the nature of axes themselves. Even though axes were probably valued both for their role as tools *and* exchange items, their potential role as convertible bronze ingots had never been fully elaborated. This changed with the production of objects like the Geistingen axes (Fontijn 2002, 160–1). These are regionally made items that look like axes, but are practically unusable. The role of the axe as an exchangeable bronze ingot was now for the first time manifested in a specialised ingot form. These unusual items were treated, however, as if they were similar to regular work axes. Some were deposited in marshy contexts, a practice that previously seems to have been restricted to axes which had led an intensive use-life. Something must have changed with respect to the prevailing idea – meaning through life – behind the choice of items for deposition. In a way, the incorporation of locally made, unused and unusable axes into this long-standing tradition of axe deposition can be taken as a sign that the ideas behind deposition were gradually becoming void.

A similar phenomenon can perhaps be recognised in the adoption of iron axes. There is only a handful of finds of Early Iron Age iron axes, but two radiocarbon-dated specimens do come from the same sort of contexts as their bronze predecessors – from rivers (Fontijn 2002, 164–5). There must, however, have been a difference

between the cultural biographies of bronze and iron axes. Whereas bronze ones are likely to have fulfilled dual roles as both exchange item and tool, iron is available almost everywhere and it is therefore unlikely that it played a similar role. If the predominance of bronze axes in deposition is related to their dual roles, then it is noteworthy that with the adoption of iron, axe deposition decreased dramatically. Indeed, the sharp decrease in the rate of metalwork deposition is above all related to the decrease in the numbers of deposited axes.

In sum, there are indications that at the end of the Late Bronze Age some of the traditional elements which had structured deposition for so long were changing, although not yet involving the deposition of weaponry. In the earliest phase of Hallstatt C, however, changes now started to take place in the field of weapon deposition as well.

Understanding the emergence of Hallstatt C chieftains' graves

Having sketched some long-term trends in burial and depositional practices, we will now return to our main question: how did the emergence of the Hallstatt C chieftains' graves, as a clear break in age-old traditions, become socially and culturally possible for the communities inhabiting the southern Netherlands? We will now argue that this can be explained by taking into account a number of the long-term developments in both depositional and burial practices, as well as changes in the socio-political sphere.

Changes in the significance of metalwork deposition in watery places

The shift from river to burial deposition in Hallstatt C was not the abrupt change that it seems to be. As shown above, changes in the traditional structure of metalwork deposition had already taken place *before* Hallstatt C. The evidence of axe deposition in particular suggests a significant transformation of the ideas which had structured selective deposition for so long. The changes in weapon deposition during Hallstatt C thus seem to have had a prelude in the last phase of the Late Bronze Age. On top of that, there were quantitative changes as well. Metalwork deposition in watery places

decreased significantly during Hallstatt C and by c. 500 BC reached its lowest level since the start of the Bronze Age. [Figure 7](#) might give the impression that the decrease in wet context deposition is counterbalanced by an upsurge of deposition in graves in the Early Iron Age. However, it should not be forgotten that most items deposited in Early Iron Age urnfield graves are tiny bronze fragments, whereas the majority of bronzes recovered from rivers and swamps are large objects like axes and spears.

Therefore there is no reason to doubt the general decline in metalwork deposition.

The obvious implication is that the social significance that bronze deposition in wet places had during the Bronze Age was changing. Undoubtedly, this is related to the general collapse of the European bronze exchange network (see also Needham this volume). Nevertheless, the importation of bronze did not stop in the Early Iron Age, nor did the deposition of metalwork in wet places entirely cease. Bronze Wesseling and Geistingen axes, iron axes, some bronze ornaments and a few spearheads, bronze Gündlingen swords and even a few iron Hallstatt C swords are known from watery places, albeit in low numbers (Fontijn 2002, appendices 2.12, 2.14, 4.2, 5.5, 6.3; for Hallstatt D/La Tène A deposits see Ball 1999; Van den Broeke 2001). A full list of Early Iron Age sword finds from the study area is given in the Appendix.

A decisive shift in supra-regional exchange and communication networks

The Bronze Age–Iron Age transition took place against the background of an important reorientation of supra-regional exchange networks. Apart from being the channels of metalwork supply, these networks were also the channels via which cultural information flowed. For the Late Bronze Age, this can be inferred from the evidence of ornaments selected for deposition, which implies shared ideas on the appearance of high-status females (Fontijn 2002, [chapters 8](#) and [12](#)). From the Middle Bronze Age onward, virtually all the imported metalwork found in the southern Netherlands came from either the Atlantic or the central European and adjacent German regions (Fontijn 2002, 149; 186). Nordic influences and imports were virtually nonexistent. In the last centuries of the Late Bronze Age, there was even a marked

predominance of Atlantic (north French) products, or items stylistically affiliated to them.

What applies to objects, applies to cultural ideas as well. The 'taboo' on weapons in burial deposition in the southern Netherlands is also known in the Belgian and northern French Bronze Age. In the German regions adjacent to the southern Netherlands, swords were however occasionally deposited in graves (e.g. Gehring-Kerig, Kr. Mayen, grave no. 16; Desittere 1968). In the subsequent Gündlingen/Wehringen phase, most swords which circulated in the southern Netherlands are Atlantic types, just as before (Warmenbol 1988). However, the southern Netherlands now differs from Atlantic cultural conventions regarding sword deposition. For the first time, swords were placed in burials. It may be argued that in the southern Netherlands, cultural ideas on deposition were realigned, becoming more closely affiliated to those of the adjacent German regions.

This can be seen as a prelude to developments in the later part of Hallstatt C. In the wealthiest and most recent graves of Hallstatt C (Wijchen, Oss, Rhenen), there is no convincing evidence for Atlantic metalwork. The imported items of warrior equipment in these graves are all of continental origin, and in line with continental habits they became part and parcel of the imagery of the dead in burials. There is no longer any indication that similar valuables were also deposited in rivers or marshes. What seems to have happened is that in the course of Hallstatt C not only objects from continental regions, but also cultural ideas and values, acquired a growing influence. This ultimately manifested itself in the adoption of a warrior ideology modelled on central European ideas, and perhaps also in the taking up of ideas on how to treat the relevant paraphernalia (deposition in individual graves instead of in rivers or marshes).



Fig. 8. The hilt of a bronze Gündlingen sword said to be from the river Meuse near Overasselt/Heumen (source: Fontijn 2002, fig. 8.14).

Changes in the burial rite

The growing significance of continental networks in the exchange of goods and cultural information cannot in itself explain why burials came to be viewed as appropriate places for weapon deposition. In our view, this should also be linked to the gradual long-term trend of 'individualisation', which we ourselves and Roymans (1991, 56) recognise in the burial ritual through time. As argued above, Late Bronze Age urnfields display the same concern with collective identities as the Middle Bronze Age barrows before them, but there is more variation in the burial ritual of individuals in urnfields. Initially, this was elaborated in a way that did not signal major differences between individual graves within an urnfield.

During the Early Iron Age, this clearly changed when, for the first time, graves were constructed that were much larger than the others. In some cases, this 'individualisation' was elaborated to such an extreme that monumental graves were isolated from the rest of the cemetery (Fontijn 1996, 84). It is important to note that this hierarchisation of the burial rite does not only apply to the circular barrows containing Hallstatt C imports. Other extremely large barrows, like the long barrows of Someren type, lack such items. This implies that the hierarchisation was part of a wider development in the burial ritual that had already been under way for some time. In other words, the burial ritual gradually changed through time to become more open for prestigious display of all kinds, the 'openness' for deposition of prestigious metalwork being one of its manifestations.

How things changed: early Hallstatt C warrior graves versus later ones

Wealthy burial sets containing novel categories of prestige goods like those from Wijchen or Oss do not seem to have been adopted all of a sudden. Although it is difficult to follow the development of Hallstatt C warrior graves in any detail, we can differentiate between graves that are relatively early in Hallstatt C, and those which are later. It has been argued that bronze Gündlingen swords date to an early phase within Hallstatt C (Pare 1991; Roymans 1991, 20–1). It is difficult, however, to date most graves with iron swords (like Meerlo or Horst-Hegelsom) more precisely than

‘Hallstatt C’ (Lanting and Van der Plicht 2001–2). For typochronological reasons, it is quite clear however that Oss, Wijchen, and Rhenen date very late within Hallstatt C, indeed for Oss and Wijchen, a date early in Hallstatt D may be more likely (*ibid.*).

Two burial complexes contain Gündlingen swords: Neerharen-Rekem no. 72 and Weert tumulus O. The former has a precise and reliable date very early in Hallstatt C. Using OxCal v3.8, the radiocarbon date published by Lanting and Van der Plicht for cremated bone from the Neerharen grave (GrA-17787/19062: 2675 \pm 40 BP) calibrates to between 840–795 cal. BC at 95.4% probability. On the basis of this evidence, we can sketch some developments that took place *during* Hallstatt C. The road to the most impressive and outstanding Hallstatt affiliated graves like Oss and Wijchen was evidently paved early in Hallstatt C, effectively coinciding with the Gündlingen/Wehringen phase. In retrospect, this phase can be seen as a true period of transition, involving both new and old practices.

The early graves with bronze Gündlingen swords herald a clear break with older depositional traditions. Nevertheless, most Gündlingen swords were deposited in watery places as before (Fig. 8 and Appendix). Although two iron Hallstatt C swords are known from riverine contexts (Battel), most are found in graves. By the time that bronze swords were replaced by iron ones in the later part of the Early Iron Age, swords were almost exclusively being deposited in graves. Next, the new practice of depositing prestige artefacts like swords in graves in the Gündlingen/Wehringen phase can be understood as a first sign of the individual differentiation in burial sets which characterises the later Hallstatt C warrior graves.

In the case of the early Gündlingen graves, it would seem that the individual differentiation brought out by the deposition of swords was counterbalanced by a still stronger emphasis on collectivity. Neerharen-Rekem no. 72 is a collective grave containing three swords and spears and the remains of three individuals (Van Impe 1980). Weert tumulus O is exceptional, being a large barrow (diameter 16 m), but it was nevertheless not an individual grave like the later Hallstatt C chieftains’ graves, but rather a collective one. According to Gerdson (1986, no. 284a), it contained three

separate urn burials with swords.

With regard to the burial sets, we find both old and new elements in the Gündlingen graves. The swords themselves already seem to refer to the (symbolic) significance of horse riding. The remarkable winged chapes of these swords, an entirely new element, only make sense if they were part of scabbards worn by mounted warriors (Cowen 1967, 418–20). The significance of horses would become a crucial element of the true Hallstatt C warrior imagery of the later graves of that period. The burial set of grave 72 of Neerharen-Rekem, however, consists of swords and spearheads, which echoes the traditional Bronze Age warrior outfit; the combination is unknown from later warrior graves (Van Impe 1980).

The Hallstatt C burials as displaying a new elite ideology

In the later part of Hallstatt C, we see a wholesale transition to burial deposition, as well as completion of the shift to using and depositing iron instead of bronze swords. Their individual character aside, there is not much to set relatively modest Hallstatt C burials like Someren-Philipsdamping apart from the earlier Gündlingen sword burials, enabling us to see the transition to Hallstatt C as the logical conclusion of a gradual process of change.

There is, however, a marked difference between a grave like Neerharen-Rekem no. 72, and the latest and wealthiest Hallstatt C graves, such as those from Oss (Fig. 9) and Wijchen (Fig. 10). Nothing prepares for the introduction of entirely novel items like large bronze vessels, horse gear and elements of four-wheeled ceremonial wagons (Rhenen, Wijchen). This ‘novelty’ is also apparent in the material used (iron) and the unprecedented technological refinement of some items (large bronze vessels made from sheet metal, a technique unknown in the southern Netherlands; Fontijn 2002, 185). These new elements refer to a highly specific elite ideology unknown in the region, emphasising the significance of drinking (the bronze vessels) and new ideas on the hereafter (the ceremonial wagons in burial context). We would therefore argue that there indeed was a deliberate concern with ‘novelty’ and ‘otherness’ in such graves; Roymans’ view that these Hallstatt C chieftains’ graves belong to chiefly individuals who deliberately sought to differentiate themselves from existing elites

still holds true (Roymans 1991, 59–61).

The Hallstatt C burials as displaying traditional ideas on warriorhood

If we want to understand how these ‘novel’ elements of the warrior image in Hallstatt C graves became culturally acceptable, we should pay more attention to the way in which they were introduced and re-contextualised in the burial rite. Although the ‘taboo’ on martial items in funerary contexts was now definitely broken, the ambiguity associated with the representation of warriorhood in funerary contexts continues. Once weapons were allowed in burials, they only entered the grave in a damaged state. The way in which they were broken, bent, or damaged suggests that this way of destroying swords was ostentatious and of a special character. For example, the Mindelheim sword from Oss was not simply bent, but elegantly bent in a spiral form (Fig. 9). The sword from Meerlo was wrapped up almost like a parcel.

These ways of deforming swords are much more than simply smashing a sword until it broke: they are time-consuming, require repeated heating and adjustment of the sword’s form and therefore must have been a meaningful, symbolic act. This is in marked contrast to the splendid, undamaged state in which weaponry was traditionally deposited in watery places. The moment swords finally became part of the imagery of the dead, they were rendered unusable. The martial element that now seems to be present, therefore is treated in such a way that it no longer seems to serve as a marker of active warrior status. In a way, therefore, the ambiguity and taboo with respect to weapons in graves thus seems to continue, albeit in another way.



Fig. 9. The burial equipment from the 'chieftain's grave' at Oss found in 1933 and restored in 1990 (photo: National Museum of Antiquities, Leiden, the Netherlands).

The socio-political context

We began by stating that political and economic changes alone cannot explain the transformation of age-old cultural conventions. The discussion so far has tried to redress the balance in favour of changes in the meanings of depositional and burial practices. It is not, however, our contention that socio-political developments are less important in such processes than is often claimed. On the contrary, we believe that it is vital to ask whether Bronze Age and Iron Age socio-political contexts are wholly comparable. In our view there are a number of socio-political and historical developments that are important in explaining why changes followed the course they did. We are also aware, however, that it is often problematic to assess their impact. We want to highlight the following points.

Profound changes in supra-regional contact networks

The impact of the Hallstatt C networks on our region followed the collapse of the supra-regional Late Bronze Age exchange networks. As was argued, in the Early Iron Age, a marked reorientation of

exchange networks towards the central European regions took place that is unparalleled and which represents a clear break with the way in which Bronze Age exchange networks were constituted. Although impossible to prove, this new situation potentially allows the establishment of new supra-regional contact networks, offering possibilities for the emergence of a new elite (*cf.* Roymans 1991).

Changes in socio-political structure

We touched upon the decreasing size of houses and households during the Late Bronze Age and suggested that this may well herald a change in the social structure: smaller units than before now became the core units of local groups. One of us has argued that this development indicates the gradual breaking up of the traditional structure of kin groups (extensive longhouses and collective barrows) with elders as their natural leaders (the primary burials in such barrows), leading to a situation in which smaller units (nuclear families?) became the core elements (Fokkens 1997).

The decreasing emphasis on kin ties, which was a hallmark of Middle Bronze Age barrows, in favour of the 'individualising' tendencies of the Late Bronze Age burial rite may reflect such a process (*ibid.*). Whilst such a situation appears more egalitarian, if our suggestion on the breaking up of the traditional kin group structure holds true, then status positions may be challenged and claimed by more people than before. This would imply that the social context of the Early Iron Age was different from the situation at, say, the start of the Middle Bronze Age in terms of the limitations and possibilities for access to powerful positions within the local community.

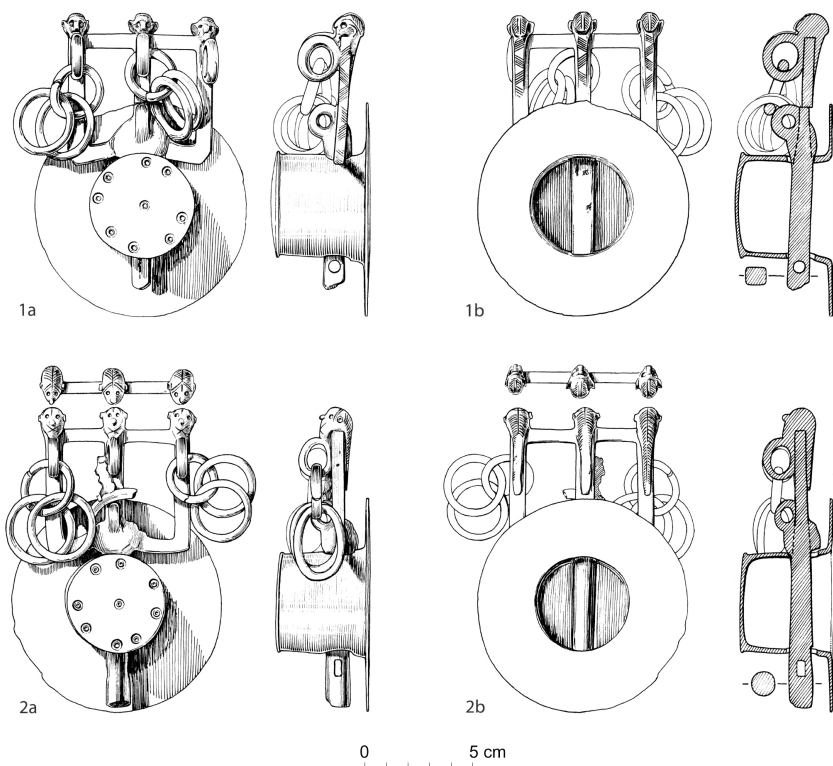


Fig. 10. Two of the four axle caps with linch pins from Wijchen: a. front and side view; b. rear view and cross-section (drawing: G.J. de Vries, ROB).

Expansion and the increasing significance of territoriality

Finally, thought should be given to the specific characteristics of the settlement history of the Early Iron Age. This period seems to have been a phase of territorial expansion, possibly in a context of demographic growth. Settlements were founded in places that were previously uninhabited, and there are signs that territoriality became more important (Roymans and Kortlang 1999, 40). The very adoption of Celtic field agriculture may have been related to this (see above). It is conceivable that in a context of growing territoriality, claims to the land by individual local groups became more outspoken, resulting in new socio-political tensions, competition, and alliances between groups. It might also be a context in which new chiefly positions were claimed, challenged and established.

Conclusion

Existing theories see the emergence of Hallstatt C chieftains' graves as a new social arena in which power and prestige were gained, probably in relation to the emergence of a new elite. The adoption of weapon graves represents a profound break with past practices, and the concept of warriorhood that these enshrine seems to contain some novel and unprecedented elements. Our concern has been less with these socio-political changes and more with the cultural ideas that shaped depositional and burial practices. How could the emergence of such a 'novel' phenomenon become socially and culturally acceptable to the communities living in the southern Netherlands? We have argued that if we want to understand this process, there are several things that we should consider.

First of all, we have sought to show that the Hallstatt C burials *are not entirely the novel phenomenon that they seem to be*. The creation of such wealthy burials can be seen as fitting within a process of differentiation in burial practices that had already been under way for some time. A new study of metalwork deposition shows that the age-old tradition of depositing valuables in wet places was also undergoing changes, long before the Early Iron Age. As a consequence, we conclude that the shift from deposition of valuables in wet places to burial deposition was not as abrupt as it might seem. Indeed it is possible to recognise a phase of transition in which weapon deposition in rivers was still practised, whilst weapons also entered burial grounds for the first time: the Gündlingen/Wehringen phase.

Second, it is important to realise that the 'novelty' of the burial ritual (lavish, individual warrior burials) – as well as novel elements in the associated martial ideology (references to riding/driving and drinking) – was something that was *negotiated in the burial ritual itself*. New items and habits were recontextualised within a rite that was profoundly native in character (cremation, the use of bronze vessels as urns, the *pars pro toto* attitude towards valuables). Also, the introduction of martial paraphernalia in burials during the Gündlingen/Wehringen phase seems to have taken place in a context of collectivity that is uncommon in the prevailing burial rite; it is only later that true individual warrior graves were constructed. We would even go as far as to suggest that the very

presence of warrior graves does not necessarily imply that the age-old taboo on weaponry and martial identities in burials was broken. This can be inferred from the fact that all known weapons in Hallstatt C graves were deliberately and ostentatiously destroyed before deposition. This is in marked contrast to the weapons deposited in watery places during the Bronze Age and the Gündlingen/Wehringen phase (undamaged and often made ready for use). In this way, the ambiguity towards martial identities in burial contexts does not really seem to have altered, but rather was differently expressed.

Third, we should see the emergence of such wealthy warrior graves against the background of a long-term process of social change: the breaking up of the traditional kin group structure of the Late Bronze Age. This may have meant that chiefly positions could be claimed or challenged by more people than before, a process that was possibly amplified by specific historical developments (marked changes in the supra-regional exchange networks and settlement history). These changes paved the way for a *more outspoken social concern with the expression of hierarchy within the collective cemetery of local groups*.

The above serves to show that the Early Iron Age chieftains' graves did not entirely come out of the blue, and emerged within traditional, native burial practices. This, however, must not blind us from one significant point. It is beyond doubt that, with the adoption of the Hallstatt C warrior equipment, we see the introduction of some entirely new elements in the construction of chiefly appearances, mirroring those current in a region hundreds of kilometres away. For example, nothing prepares us for the sudden introduction of ceremonial four-wheeled wagons. We cannot be certain whether the religious ideas associated with them were comparable to those in the Hallstatt region, but their introduction into the southern Netherlands at very least implies the adoption of novel ideas about death and warriorhood.

In a way, Hallstatt C chieftains' graves reflect a deliberate concern with 'otherness' and 'novelty', but displayed and negotiated according to native practices. The recent re-excavation of the Hallstatt C 'chieftain's barrow' of Oss makes this same point (Fokkens and Jansen 1998; Gerritsen this volume). The excavation

showed that this special barrow, unparalleled in our region for its monumentality, was in fact built over a much smaller Middle Bronze Age barrow (Fig. 6 above). The new and unprecedented phenomenon was apparently only conceivable once it was explicitly linked with the past.

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Appendix: Early Iron Age swords of bronze and iron from the southern Netherlands

<i>Site</i>	<i>Sword type</i>	<i>Use traces</i>	<i>Context</i>	<i>Patina</i>	<i>Info *</i>	<i>References</i>
NL: Gelderland						
Heumen-Overasselt (dubious)	Bronze Gündlingen	–	River	Black-green	P	Cowen 1967, 440, no. 148
Millingen-Kekerdom (dubious)	Bronze Gündlingen	–	River	Dk brown	P	Cowen 1967, 440, no. 146
Nijmegen-Waalkade	Bronze Gündlingen	–	(River?)	–	–	Roymans 1991, app. 2
Wijchen	Iron (frag.)	–	Grave with wagon parts, bronze vessel, horse gear, bronze axe (burnt)	–	P	Pare 1992, 219–20, no.1
NL: Limburg						
Arceen-Velden	Bronze Gündlingen	Sharp	River	Black-bronze	P	Cowen 1967, 440, no. 143
Heythuizen-Bisschop	Iron	–	Grave?	–	S	Roymans 1991, app. 2, table 4
Horst-Hegelsom	Iron	Folded up	Grave, large barrow	–	P	Roymans 1991, app. 2, table 4
Maastricht-Heer-Vroendaal	Bronze Gündlingen	Broken	Unclear, near urnfield	–	P	Dijkman 2000
Meerlo	Iron	–	Grave? Also: horsegear	–	S	Roymans 1991, app. 2, table 4
Montfort	Bronze Gündlingen, double ricasso	–	Marsh?	Bronze	S	Cowen 1967, 439, no. 138; Roymans 1991, app. 2
Roermond	Bronze Gündlingen	–	River	Very well preserved	S	Cowen 1967, 439, no. 139
Weert-Boshoven	Bronze Gündlingen (frag.)	–	In separate grave in tumulus O	–	P	Gerdens 1986, no. 284a
Weert-Boshoven	Bronze Gündlingen (frag.)	–	In separate grave in tumulus O	–	P	Gerdens 1986, no. 284a
Weert-Boshoven	Bronze Gündlingen (frag.)	–	In separate grave in tumulus O	–	P	Gerdens 1986, no. 284a
NL: Noord-Brabant						
Cuyk-St Agatha	Bronze Gündlingen	Broken	River	–	P	Cowen 1967, no. 144
Heusden	Bronze Gündlingen	–	River	–	P	Cowen 1967, no. 145
Oss-Vorstengraf	Iron, Mindelheim	Sword folded up	In grave, with bronze vessel, horse gear, iron axe, dagger (?), knife (?). In extremely large barrow (D = 52 m)	–	P	Roymans 1991, app. 2, table 4
Someren-Philipsclamping	Iron	–	Grave	–	P	Roymans 1991, app. 2, table 4
Someren-Kraaijenstark	Iron	–	Grave	–	P	Roymans 1991, app. 2, table 4
NL: Utrecht (just north of research area)						
Rhenen-Rijn	Bronze Gündlingen	–	River	–	P	Cowen 1967, 440, no. 147
Rhenen-Koerheuvel	no sword	–	In grave, with bronze vessel, bronze Wesseling axe, bronze ring and fitting, 2 iron buckles, 3 iron linchpins, 2 bronze frags, frag. of nave fittings? no barrow?	–	P	Van Heeringen 1998–9
B: Antwerpen						
Battel-Dijle	Iron, short, with bronze hilt	–	River	–	P	Warmenbol 1987, 60
<i>Site</i>	<i>Sword type</i>	<i>Use traces</i>	<i>Context</i>	<i>Patina</i>	<i>Info *</i>	<i>References</i>
Battel-Dijle	Iron, short	–	River	–	P	Warmenbol 1987, 60
Meer	2 iron short swords?	–	–	–	–	Roymans 1991, app. 2
B: Limburg						
Rekem grave 72	3 bronze Gündlingen	Deliberately damaged	In grave with 2 bronze chapes, 3 spearheads; allegedly cremation remains of 3 adults (2 male, 1 female)	–	P	Van Impe 1980, no. 72; Warmenbol 1988, 248, 250

***Note: Information on depositional context as derived from published**

report (P) or reconstructed by Fontijn (S).

Bibliography

- Ball, E.A.G. 1999. *Difference in Deposition. Changing Patterns in the Expression of Status in the Mortuary Ritual during the Early and Middle Iron Age in The Low Countries*. Unpublished M.A. dissertation, University of Leiden.
- Brongers, J.A. 1976. *Air Photography and Celtic Field Research in the Netherlands*. Amersfoort: Nederlandse Oudheden 6.
- Blouet, V., Buzzi, P., Dreidemy, C. et al. 1992. Données récentes sur l'habitat de l'Age du Bronze en Lorraine, in C. Mordant and A. Richard (eds), *L'habitat et l'occupation du sol à l'âge du Bronze en Europe. (Actes du colloque international de Lons-le-Saunier mai 1990)*, 177–194. Paris: Documents Préhistoriques 4.
- Bourgeois, J., Bourgeois, I. and Charetté, B. (eds) 2003. *Bronze Age and Iron Age Communities in North-Western Europe*. Brussels: Koninklijke Vlaamse Academie van België voor Wetenschappen en Kunsten.
- Cowen, J.D. 1967. The Hallstatt sword of bronze on the continent and in Britain, *Proceedings of the Prehistoric Society* 33, 377–454.
- De Hingh, A. 2000. *Food Production and Food Procurement in the Bronze Age and the Early Iron Age (2000–500 BC)*. Leiden: Archaeological Studies Leiden University 7.
- De Kort, J.W. 2002. Schapen op de heide. Een vegetatiereconstructie van de omgeving van het vorstengraf van Oss in de Vroege IJzertijd, in Fokkens and Jansen 2002b, 341–353.
- Desittere, M. 1968. *De urnenveldenkultuur in het gebied tussen Neder-Rijn en Noordzee*. Brugge: Dissertationes Archaeologicae Gandenses 11.
- Diepeveen-Jansen, M. 2001. *People, Ideas and Goods. New Perspectives on 'Celtic Barbarians' in Western and Central Europe*. Amsterdam: Amsterdam Archaeological Studies 7.
- Dijkman, W. 2000. Het zwaard van de heer van Heer, *Archeologie in Limburg* 84, 17–18.
- Fokkens, H. 1996. The Maaskant project: continuity and change of a regional research project, *Archaeological Dialogues* 3, 196–215.
- Fokkens, H. 1997. From barrows to urnfields: economic crisis or ideological change? *Antiquity* 71, 360–373.
- Fokkens, H. 1998. *Drowned Landscape. The Occupation of the Western Side of the Fries-Drentian Plateau (4400 BC–AD 500)*. Assen: Van Gorcum.
- Fokkens, H. 1999. Cattle and martiality. Changing relations between man and landscape in the Late Neolithic and the Bronze Age, in C. Fabech and J. Ringtved (eds), *Settlement and Landscape (Proceedings of a*

- Conference in Århus, Denmark, May 1998*), 35–43. Moesgård: Jutland Archaeological Society.
- Fokkens H. 2003. The longhouse as a central element in Bronze Age daily life, in Bourgeois *et al.* 2003, 9–38.
- Fokkens, H. and Jansen, R. 1998. Het vorstengraf van Oss (Nl.) na 64 jaar opnieuw onderzocht, *Lunula. Archaeologia Protohistorica* 6, 49– 52.
- Fokkens, H. and Jansen, R. 2002a. 2000 jaar bewoningsdynamiek. Thema's in het metaaltijdenonderzoek, in Fokkens and Jansen 2002b, 1–22.
- Fokkens, H. and Jansen, R. (eds) 2002b. *2000 jaar bewoningsdynamiek. Brons- en ijzertijdbewoning in het Maas-Demer-Scheldegebied*. Leiden: Faculty of Archaeology.
- Fokkens, H. and Jansen, R. 2004. *Het vorstengraf van Oss. Een archeologische speurtocht naar een prehistorisch grafveld*. Utrecht: Matrijs.
- Fontijn, D.R. 1996. Socializing landscape. Second thoughts about the cultural biography of urnfields, *Archaeological Dialogues* 3, 77–87.
- Fontijn, D.R. 2002. *Sacrificial Landscapes. Cultural Biographies of Persons, Objects, and 'Natural' Places in the Bronze Age of the Southern Netherlands, 2300–600 BC*. Leiden: Faculty of Archaeology, *Analecta Praehistorica Leidensia* 33/34.
- Fontijn, D.R. and Cuijpers, A.G.F.M. 2002. Revisiting barrows: a Middle Bronze Age burial group at the Kops Plateau, *Berichten van de Rijksdienst voor het Oudheidkundig Bodemonderzoek* 45, 157–189.
- Friedrich, M. and Hennig, H. 1996. A dendrodate for the Wehringen Iron Age wagon grave (778±5 BC) in relation to other recently obtained dates for the Hallstatt period in southern Germany, *Journal of European Archaeology* 4, 281–303.
- Gerdson, H. 1986. *Studien zu den Schwertgräbern der älteren Hallstattzeit*. Mainz: von Zabern.
- Gerritsen, F.A. 2003. *Local identities. Landscape and Community in the Late Prehistoric Meuse–Demer–Scheldt Region*. Amsterdam: Amsterdam Archaeological Studies 9.
- Harding, A.F. 1994. Reformation in barbarian Europe, 1300–600 BC, in B.W. Cunliffe (ed.), *The Oxford Illustrated Prehistory of Europe*, 304–331. Oxford: Oxford University Press.
- Hedeager, L. 1992. *Iron-Age societies. From Tribe to State in Northern Europe, 500 BC–AD 700*. Oxford: Blackwell.
- Huth, C. 2003. Poor Belgium, rich Belgium. Some reflections on the nature of metalwork depositions in the Late Bronze Age and Early Iron Age, in Bourgeois *et al.* 2003, 39–60.
- Kooi, P.B. 1979. *Pre-Roman Urnfields in the North of the Netherlands*. Groningen: Wolters-Noordhof.

- Kristiansen, K. 1989. Value, ranking and consumption in the Bronze Age, in H.A. Nordström and A. Knappe (eds), *Bronze Age Studies: Transactions of the British-Scandinavian Colloquium in Stockholm, May 1985*, 21–24. Stockholm: Museum of National Antiquities Studies 6.
- Kristiansen, K. 2000. *Europe before History*. Cambridge: Cambridge University Press.
- Lanting, J.N. and Van der Plicht, J. 2001–2. De ^{14}C -chronologie van de Nederlandse pre- en protohistorie IV: bronstijd en vroege ijzertijd, *Palaeohistoria* 43/44, 117–262.
- Louwe Kooijmans, L.P. 1998. Bronzezeitlichen Bauern in und um die niederländische Delta Niederung, in B. Hänsel (ed.), *Mensch und Umwelt in der Bronzezeit Europas*, 327–339. Kiel: Oetker-Voges Verlag.
- Lohof, E. 1991. *Grafritueel en sociale verandering in de bronstijd van Noordoost-Nederland*. Unpublished Ph.D. thesis, University of Amsterdam.
- Lohof, E. 1994. Tradition and change. Burial practices in the Late Neolithic and Bronze Age in the north-eastern Netherlands, *Archaeological Dialogues* 1, 98–118.
- Müller-Wille, M. 1965. *Eisenzeitlichen Fluren in den festländischen Nordseegebieten*. Münster: Geographische Kommission, Siedlung und Landschaft in Westfalen 5.
- Pare, C.F.E. 1991. *Swords, Wagon-Graves, and the Beginning of the Early Iron Age in Central Europe*. Marburg: Kleine Schriften aus dem vorgeschichtlichen Seminar Marburg 37.
- Pare, C.F.E. 1992. *Wagons and Wagon-Graves of the Early Iron Age in Central Europe*. Oxford: Oxford University Committee for Archaeology Monograph 35.
- Roymans, N. 1991. Late urnfield societies in the Northwest European Plain and the expanding networks of Central European Hallstatt groups, in N. Roymans and F. Theuvs (eds), *Images of the Past. Studies on Ancient Societies in Northwestern Europe*, 9–89. Amsterdam: Studies in Prae- en Protohistorie 7.
- Roymans, N. 1996. The sword or the plough. Regional dynamics in the Romanisation of Belgic Gaul and the Rhineland area, in N. Roymans (ed.), *From the Sword to the Plough. Three Studies on the Earliest Romanisation of Northern Gaul*, 9–126. Amsterdam: Amsterdam Archaeological Studies 1.
- Roymans, N. and Gerritsen, F. 2002. Landschap, ecologie en mentalités. Het Maas-Demer-Scheldegebied in een lange-termijn perspectief, in Fokkens and Jansen 2002b, 371–406.
- Roymans, N. and Kortlang, F. 1999. Urnfield symbolism, ancestors and the land in the Lower Rhine Region, in F. Theuvs and N. Roymans (eds),

Land and Ancestors: Cultural Dynamics in the Urnfield Period and the Middle Ages in the Southern Netherlands, 33–62. Amsterdam: Amsterdam University Press.

- Schinkel, K. 1998. Unsettled settlement, occupation remains from the Bronze Age and the Iron Age at Oss-Ussen. The 1976–1986 excavations, in H. Fokkens (ed.), *The Ussen Project: the First Decade of Excavations at Oss*, 5–306. Leiden: *Analecta Praehistorica Leidensia* 30.
- Theunissen, E.M. 1993. Once again Toterfout-Halve Mijl, *Analecta Praehistorica Leidensia* 26, 29–43.
- Theunissen, E.M. 1999. *Midden-bronstijdsamenlevingen in het zuiden van de Lage Landen. Een evaluatie van het begrip 'Hilversum-cultuur'*. Unpublished Ph.D. thesis, University of Leiden.
- Treherne, P. 1995. The warrior's beauty: the masculine body and self-identity in Bronze-Age Europe, *Journal of European Archaeology* 3, 105–144.
- Van Beurden, L. 2002. Vegetatieontwikkeling en landgebruik vanaf het Laat-Mesolithicum tot in de Middeleeuwen in de omgeving van 's-Hertogenbosch, in Fokkens and Jansen 2002b, 271–285.
- Van den Broeke, P.W. 2001. The inconspicuous continuation of bronze deposition in Dutch wet contexts after the Early Iron Age, in W.H. Metz, B.L. van Beek and H. Steegstra (eds), *Patina. Essays Presented to Jay Jordan Butler on the Occasion of his 80th Birthday*, 161–168. Groningen: privately published.
- Van den Broeke, P.W. 2003. De Betuweroute aangevuld: onderzoek naar de metaaltijden in het Betuwse deel van Nijmegen (Nl.), *Lunula. Archaeologia Protohistorica* 11, 19–24.
- Vandkilde, H. 1996. *From Stone to Bronze, the Metalwork of the Late Neolithic and Earliest Bronze Age in Denmark*. Aarhus: Jutland Archaeological Society Publications 32.
- Van Heeringen, R.M. 1992. *The Iron Age in the Western Netherlands*. Amersfoort: Rijksdienst voor het Oudheidkundig Bodemonderzoek.
- Van Heeringen, R.M. 1998–9. Burial with Rhine view: the Hallstatt situla grave on the Koerheuvel at Rhenen, *Berichten van de Rijksdienst voor het Oudheidkundig Bodemonderzoek* 43, 69–92.
- Van Impe, L. 1980. *Graven uit de Urnenveldenperiode op het Hangveld te Rekem, I: Inventaris*. Brussels: *Archaeologica Belgica* 227.
- Van Impe, L. 1994. Een depot van kokerbijlen uit de Plainseacultuur (late Bronstijd) te Heppeneert-Wayerveld (Maaseik, prov. Limburg), *Archeologie in Vlaanderen* 5, 7–40.
- Verlinde, A.D. 1985. Die Gräber und Grabfunde der späten Bronzezeit und frühen Eisenzeit in Overijssel, *Berichten van de Rijksdienst voor het Oudheidkundig Bodemonderzoek* 35, 231–412.

- Webley, L. 2002. *A Social Archaeology of the Iron Age Household. Domestic Space in Western Denmark, 500 BC–AD 200*. Unpublished Ph.D. thesis, University of Cambridge.
- Warmenbol, E. 1987. *Schatten uit de Schelde. De voorwerpen uit de metaaltijden uit de verzameling Hasse*. Antwerp: Stad Antwerpen.
- Warmenbol, E. 1988. Broken bronzes and burnt bones. The transition from Bronze to Iron Age in the Low Countries, *Helinium* 28, 244– 270.

Early La Tène burial practices and social (re)constructions in the Marne–Moselle region

Marian Diepeveen-Jansen

Introduction

In central Europe, from 1300 BC onwards, a recurrent pattern can be discerned of the emergence and disappearance of monumental graves with rich inventories. In the last quarter of the twentieth century, this phenomenon stimulated archaeological theories that still dominate the interpretation of conspicuous burial practices. The focus of these archaeological models is the grave data from the Late Hallstatt (600–450 BC) and Early La Tène periods (450–250 BC), particularly the imported objects from the Mediterranean world that appear in the grave inventories. The fluctuations in the numbers of rich graves are explained in social terms as reflecting the emergence and downfall of hierarchical, centralised organisations, and in economic terms as reflecting integration into, or exclusion from, Mediterranean commercial networks. In these theories, social and political developments in transalpine societies are intimately linked to trade and to the determining influence of ‘more civilised’ societies.

Critical studies are now departing from these approaches, both methodologically and theoretically. On the one hand, studies (especially of the Early La Tène period) are mostly (micro-) regional overviews of (rich) burials, in which comparison of neighbouring regions with similar developments is lacking. On the other hand, in more general overviews, the data are incorporated into a static framework and interpreted as reflecting a fossilised social structure. There is often little or no consideration of the mechanisms

responsible for the presence and distribution of archaeological data, either from the perspective of the indigenous population, or with regard to the ways in which theories, models, and excavation methods have shaped the archaeological record.

I will begin by summarising current theories and models based on Late Hallstatt and Early La Tène burial practices in central Europe and setting out some of the underlying premises. Secondly, I will offer an overview of the archaeological data from the Marne–Moselle region in the Early La Tène period, but taking the Late Hallstatt period into account as the starting point of these developments. The focus of the third section of the paper is on the symbolic and social meaning of goods and the context of deposition. This is followed by an interpretation of the fluctuation of (elite) graves in the Marne–Moselle zone in which ongoing processes in societies form the basis for the specific mechanisms of production and reproduction of social identities and territorial claims adopted by indigenous peoples.

In the final section, I will offer some more general remarks. As this article is a summary of previous research, I will limit myself to the broad outlines of developments in the Late Hallstatt and Early La Tène periods in the Marne–Moselle. For a full review of all the data, literature, and the theoretical principles underlying my interpretation, see Diepeveen-Jansen (2001).

From wining and dining princes to fighting and drunken barbarians

Socio-political theories and models of Iron Age societies in western and central Europe are primarily based on the archaeological data from the west Hallstatt zone bordering the northern fringe of the Alps, incorporating the subsequent developments in the Marne–Moselle zone as the end point of the events determining the relations between the Mediterranean world and the transalpine ‘barbarian’ princes or *Fürsten*.

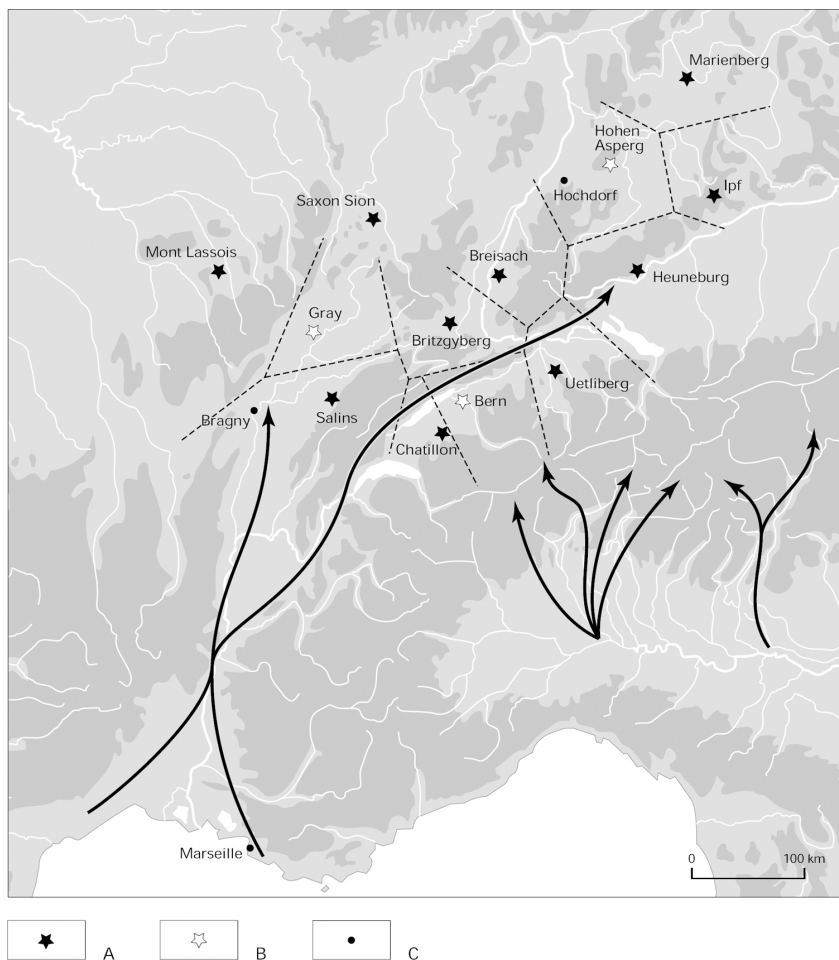


Fig. 1. Distribution map of Fürstensitze in the Late Hallstatt period and the main routes to the Mediterranean area. A. Fürstensitz; B. presumed hillfort near elite tumuli; C. lowland settlement (after Mohen et al. 1988; Härke 1979; Kimmig 1983).

In the Late Hallstatt period the phenomenon of monumental tumuli, in which the richly equipped dead person was buried in a wooden chamber, expands from central Europe westwards as far as eastern and central France. The tumuli are often found grouped together in the vicinity of fortified hilltop settlements. These so-called *Fürstengräber* and *Fürstensitze* or *residences princières* are interpreted as the graves and dwelling places of chiefs or princes exercising their power in territories determined by Härke (1979)

with the help of Thiessen polygons (Fig. 1).

Because of the imports from Greece and Etruria found in these transalpine societies, the explanation for the emergence of these centres is generally embedded in the world system model. The relation between the periphery – the transalpine groups – and the core – the Mediterranean societies – is essentially commercial, and dominated by the ‘more civilised’ Mediterranean cultures. In political terms the princes or chiefs, more neutrally defined as elites, form the peak of a stratified society. In economic terms, they control at a regional level the extraction of raw materials, the production and redistribution of locally manufactured goods, and at a supra-regional level the long-distance trade routes and commercial contacts. In the world system model, the power of the elites is based on their position as middlemen, controlling inter-regional trade, especially the acquisition of so-called prestige goods (Frankenstein and Rowlands 1978; Bintliff 1984; Brun 1993; Cunliffe 1994).

Just as the emergence of a more centralised social organisation is seen as the result of trade relations with Mediterranean societies, the disintegration of these societies is ascribed to the reorientation of the trade routes away from the Rhône valley towards the Alpine passes (see Fig. 1). Due to their dependency on exotic prestige goods, the Hallstatt *Fürsten* or princes lost their high ranked position, resulting in the disintegration of the social system. The elite groups living to the north in the Marne–Moselle zone, took advantage of the collapse of the Hallstatt chiefdoms and took their place as middlemen in the commercial relations still dominated by the Mediterranean societies.

The Late Hallstatt elite are described as princes or chiefs, who copy the luxurious way of life of Mediterranean cultures. The Early La Tène elites are deemed to possess a more martial character as drunken and fighting ‘barbarians’. Both images are based on the goods deposited in graves. The unique, luxurious, elements of imported drinking services, and the wine itself, are seen as reflecting the life-style and the rank of the Hallstatt elites; the weapons and the two-wheeled battle chariots that of the Early La Tène elites. The character traits of the latter are thought to be confirmed by the descriptions of classical authors (for a compilation

of relevant texts, see Tierney 1959–60).

Although the integration of prehistoric developments in supra-regional world system models has stimulated archaeological theories in a positive way, many of the underlying assumptions about the causal relations between social transformations and fluctuations in grave data have subsequently been severely criticised. In the first place, economic motives are seen as paramount in social practice and socio-political developments, resulting in the dominance of mechanical causal relations between the changing commercial networks and the disintegration of the social system in the Hallstatt zone on the one hand; and its subsequent transformation into a more hierarchically organised social system in the Early La Tène Marne–Moselle zone and the ensuing emergence of elite graves there, on the other.

It is now generally assumed that the trade routes along the Rhône valley and Alpine passes were used simultaneously, and that the modest number of imported goods (not exceeding 70 items in both periods, *situlae* excluded) does not indicate trade relations with transalpine communities on a regular basis. Furthermore, the model does not explain why the trade networks linking the Early La Tène elite in the Marne–Moselle zone with the Mediterranean civilisations, which passed through the territory of the Hallstatt elites, left no imported goods there. At the same time, the design and decoration of other items, for example clothing accessories, stress the continuity of the contacts between the inhabitants of the Hallstatt zone with their neighbours both to the north and south.

A further problem is that the southern imports only appear in graves and fortifications at the end of the Late Hallstatt period (e.g. Pare 1991), whereas burial practices had already been used to define elite identities for several generations. Nor does this economic determinism explain either the sharp increase in elite graves in the Marne–Moselle zone (from c. 70 in Late Hallstatt to more than 350 in the Early La Tène Period) distributed over a smaller area, or the abundant presence of imported ware in fortified settlements in southern France (Dietler 1989), when elite graves are lacking there. A similar phenomenon can be discerned in the western part of Belgium. In the Early La Tène period burial data are scarce here and elite graves lacking, but the material culture from

some of the fortified sites reveals the same elite culture as in the neighbouring regions with chariot graves (Van Doorselaer 1990; Termote 1990).

The use of opposing constructs like 'civilisation' versus 'barbarism' inevitably imposes an active and purposive attitude on the superior Mediterranean cultures, and a passive, receiving and/or copying attitude on the part of the transalpine populations. This second assumption is embedded in evolutionary schemes and neglects the historically particular character of the form of appropriation (Thomas 1991), the *specific* motives to acquire and integrate *specific* goods in socio-ritual practices at *specific* moments in the history of the group.

The third assumption is that material culture reflects the *status quo* of homogenous political or ethnic entities. The effect of this Pompeii premise on explanatory theories and models, in which changes are revolutionary or discussed in terms of ruptures (e.g. Brun 1993; Demoule 1999), is that fluctuations in material culture are equated with movements of people, and grave inventories are used as a measure of individual positions within the internal hierarchy. In such interpretations, rich burials are mechanically linked with centralised, hierarchical organisations and the disappearance of this phenomenon with devolution into decentralised, more egalitarian structures.

These approaches ignore the fact that our basic information derives from a ritual context, from the material remains of burial practices. The overall social role of mortuary rituals is not taken into account, when this could in fact lead to significant oscillations in the archaeological visibility of grave data. These questions concern the degree to which the archaeological data are representative in a double hermeneutic sense.

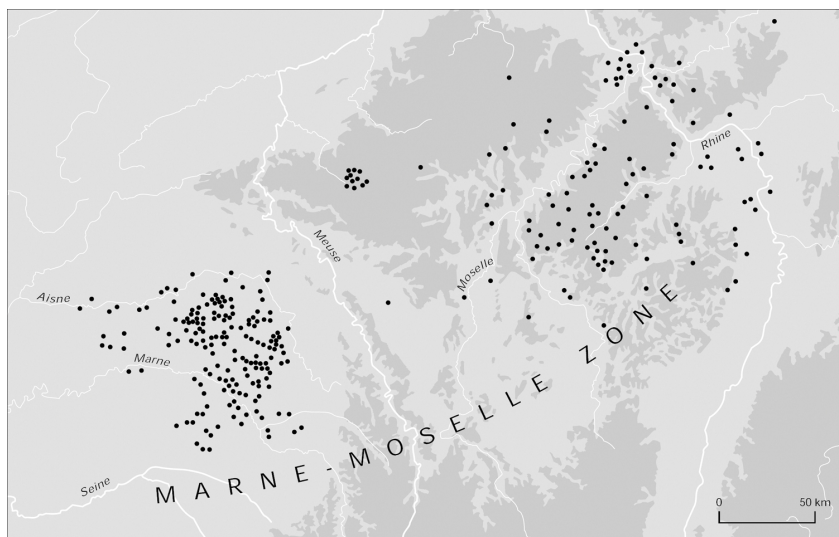


Fig. 2. Early La Tène cemeteries with elite graves in the Marne–Moselle zone.

In the following sections we will take a closer look at the changing character of the burial evidence in the three regions of the Marne–Moselle zone and compare their similarities as well as differences. The objectives of this exercise are, first, to identify the principal structural elements in the definition of identities and, second, to analyse the social meaning of the objects and of the situations and/or circumstances in which they are used.

Elites in the Marne–Moselle zone

Within the overall Marne–Moselle zone, three separate regions can be distinguished: the Aisne–Marne region in north-eastern France; the Middle Rhine–Moselle region in western Germany; and in between them, slightly to the north, the Belgian Ardennes (Fig. 2). All three regions display an increase in burial data in La Tène A (450–350 BC) followed by a decrease in the course of La Tène B (350–250 BC), accompanied by the emergence and then decline of elite graves characterised by the presence of chariots, swords and high quality vessels. In my recent study, I included dagger/sword graves in the elite group (Diepeveen-Jansen 2001). Although there are quantitative and qualitative differences in the burial rite, these burials generally have more in common with the elite group of wagon or chariot graves than with other types: firstly the presence

of the weapons themselves; secondly, a more elaborate grave monument and inventory; and thirdly, they often occupy a prominent position within the cemetery. The most important developments in the three regions are presented below.

The Aisne–Marne region

In the Aisne–Marne region the increase in burial data starts in the Late Hallstatt period and continues into La Tène A (Demoule 1999). This increase is accompanied by other changes: inhumation replaces the existing cremation rite; monumental tombs are constructed; grave inventories are richer in quantity as well as in quality; and burial rituals show evidence of growing complexity. The explosion in the number of elite graves in the region is especially striking (Table 1). Nevertheless this large number represents a minimum, because many more isolated grave monuments enclosed by circular or rectangular ditches, and cemeteries, have been discovered from the air (Lambot 1996).

The dead are buried in graves under barrows. In what is nowadays a highly cultivated landscape, these tumuli are often eroded. The graves were almost certainly still visible in the recent past, however, most probably due to the construction of barrows over the tomb, as shown by the existence of secondary structures such as ditches and palisades; the shallow depths of the graves; the structured layout of the cemetery; and toponyms such as *Motelle*, *Mont*, *Motte*, or *Tomelle*. The elite, buried with vehicles, are often recognisable by larger and more complex grave monuments. They were interred in burial chambers, which are sometimes square and lined with wood, while others are more economically dug into the chalk or gravel subsoil just to receive the chariot (Fig. 3a). The other members of the community were buried in smaller pits. Most cemeteries contain more than one elite grave. As for chariot graves, nearly half of the cemeteries have more than one example, mostly between two and five. The majority of cemeteries are small and are located in river or stream valleys and on the larger plateaux.

As to the deposition of grave goods, within cemeteries the differences in wealth are modest, as shown by the example of Vrigny (Fig. 3). In the Late Hallstatt period, only one wagon grave is known in the Aisne–Marne region. Daggers, sometimes

accompanied by lances, arrows, and in one grave by a shield, are a feature of the richest grave assemblages. In Early La Tène, daggers are replaced by swords and lances in most chariot graves. Protective weaponry such as helmets, armour discs, and shields are also present in the richest graves. The elite graves regularly (but not always) stand out for their greater wealth in personal adornment and grave goods. Jewellery and clothing accessories, brooches, and belt hooks, increase during the Early La Tène period in all graves. They are more richly decorated and enhanced with coral, in wagon or chariot graves as well as in sword burials. Precious materials such as gold, silver, amber, and glass are, however, scarce.

Other grave goods consist mainly of pottery vessels. Bronze ware is rare and restricted to no more than nine elite graves dating to La Tène A (Table 1). However, the locally fabricated vessels from elite graves often stand out for their excellence in manufacture, decoration, volume, and quantity. The assemblage forms a service for drinking and eating, deposited at different locations in the grave (see Fig. 3a). The drinking equipment generally consists of a large container and a beaker – often placed in the container – and the eating service of pots and dishes. Thanks to the favourable preservation conditions, food offerings also survive. The elite can be distinguished by exceptional deposits, such as complete boars, poultry or (cooked) frogs legs.

Multiple burials are common in the Aisne–Marne region, as are secondary rituals in which graves are reopened to bury another person, or to remove or add body elements from older graves, in particular the skulls or long arm/leg bones. At Vrigny, the chariot grave contained two persons. The skull and the left forearm were missing from grave 20, which was better preserved (Fig. 3c). The presence of fragile hand and foot bones shows that the absence of particular body elements is not due to the preservation conditions. More violent disturbances to graves, including the robbing of the grave contents shortly after burial, are also attested. For example at Quilly a third person was buried in the grave, not long after the destruction of an earlier double burial (Frézouls 1983). Both graves are dated to La Tène A. The wheel slots, the remains of some elements of the chariot, the gold discs, and the high quality pottery were the only evidence left for the earlier double elite grave.

		<i>wagon/chariot</i>	<i>bronze ware</i>	<i>dagger/sword</i>	<i>total elite graves</i>
LT B	c + bw + s	3	0	2	
	– bw + s	–	0	0	
	– – s	–	–	46	
	total elite graves				49
LT A/B	c + bw + s	83	0	9	
	– bw + s	–	0	0	
	– – d/s	–	–	40	
	total elite graves				123
LT A	c + bw + s	118	5–7	0	
	– bw + s	–	2	0	
	– – d/s	–	–	111	
	total elite graves				231
Ha D	w + bw + s	1	0	0	
	– bw + s	–	0	0	
	– – d/s	–	–	56	
	total elite graves				57
total number of elite graves					460

Table 1. Survey of the various combinations of wagon/chariot (c), bronze ware (bw) and dagger or sword (d/s) in elite graves from the Late Hallstatt and Early La Tène periods in the Aisne–Marne region.

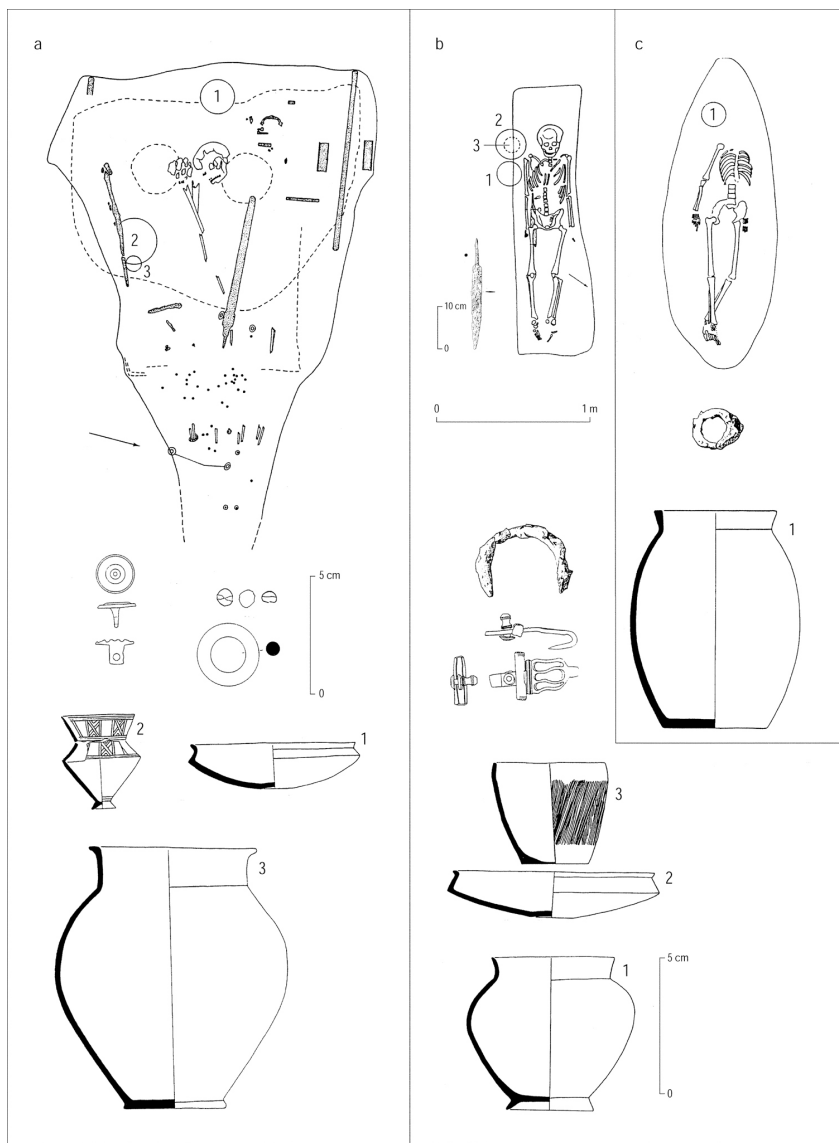


Fig. 3. Graves from the cemetery of Vrigny in the Aisne-Marne region: a. chariot grave 1 with sword; b. sword grave 4; c. grave 20 (after Chossenot et al. 1981).

		<i>wagon/chariot</i>	<i>bronze ware</i>	<i>dagger/sword</i>	<i>total elite graves</i>
LT B	c + bw + s	6	3	2	
	– bw + s	–	2	0	
	– – s	–	–	4	
	total elite graves				12
LT A	c + bw + s	32	14	1	
	– bw + s	–	38	16	
	– – s	–	–	58	
	total elite graves				127
Ha D	w + bw + s	15	3	0	
	– bw + s	–	7	0	
	– – s	–	–	0	
	total elite graves				22
total number of elite graves					161

Table 2. Survey of the various combinations of wagon/chariot (c), bronze ware (bw) and sword (s) in elite graves of the Late Hallstatt and Early La Tène periods in the middle Rhine–Moselle region.

Due to the increase in personal items left on the body – jewellery and clothing accessories – various identities can be distinguished within the cemeteries according to age, gender and status. It is generally accepted that the cemeteries comprise deceased individuals from one or more families, because each cemetery – or group within a cemetery – is composed of men, women and, albeit to a lesser degree, children. Secondary burials in older graves also include all age and gender categories. Later in the Early La Tène period, the rectangular ditches and palisades enclosing small cemeteries emphasise the family character of these graveyards.

The general decrease in graves in the La Tène B period is illustrated by the fall in the number of elite graves, especially graves with chariots (Table 1). The complexity of mortuary rituals also seems to decrease and the grave assemblage becomes less ostentatious. Multiple inhumations, secondary manipulation of body parts, and disturbances of graves, all decline. This trend continues in the following periods. In La Tène C (250–150 BC) cremation – which had never totally disappeared in the Aisne–Marne region – was reinstated. The role of the elite in this transformation is an interesting question. What for example is the significance of the La Tène B cremation graves in champagne-cork monuments at Bucy-le-Long and Quilly (Desenne and Guichard 1992; Frézouls 1983)?

The Belgian Ardennes

In a small region of 15 by 30 km in the vicinity of Neufchâteau, 19 chariot graves were constructed in La Tène A (Cahen-Delhay

1999). Only a few of the 11 cemeteries to which these elite graves belong continue into La Tène B and C. Inhumation and cremation rites are both present in the same tumulus as well as in the same cemetery.

These graves – and one in Luxembourg – belong to the French tradition with regard to the irregular form of the grave pit of some burials, which includes trenches for the wheels and the pole; the deposition of horse gear; the decorative style; the pottery forms; and the restricted inventory of goods. Apart from the chariot and horse gear, only a single sword is included and other weaponry is also scarce. The corpse is modestly provided with jewellery and clothing accessories. Pottery vessels are present in most graves. The assemblage could be interpreted as representing the two most essential elements of a drinking service: a pottery situla as the container and, often placed therein, a beaker. Archaeological evidence of human presence is scarce before and after La Tène A.

The Middle Rhine–Moselle region

As in the Aisne–Marne region, the tradition of burial under a barrow continues from the Late Hallstatt period (Haffner 1976). The cremation rite is dominant throughout the Iron Age and is only replaced by inhumation in La Tène A, although not completely in all micro-regions. The sharp increase in burial data in La Tène A (Table 2) goes hand in hand with the inhumation rite and increasingly ostentatious burial practices, especially in the Hochwald Nahe micro-region to the south of the River Moselle (Fig. 2 above).

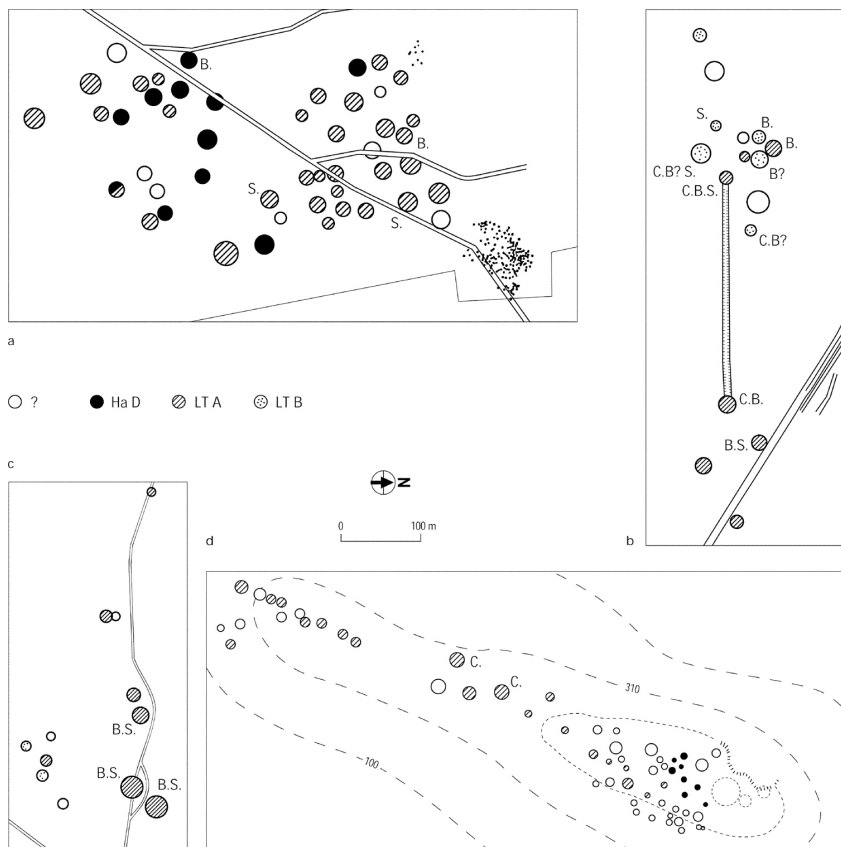


Fig. 4. Chronological development of Late Hallstatt and Early La Tène cemeteries in the middle Rhine–Moselle region. a. Horath; b. Bescheid; c. Hopstädten; d. Koborn. Contents of elite graves are as follows: C=chariot; B=bronze ware; S=sword (after Haffner 1976; 1992; Eiden 1982).

As in the other regions, existing cemeteries frequently expand in size from Late Hallstatt into the Early La Tène period (Fig. 4a, d) and many new small burial grounds appear (Fig. 4b, c). At the same time, the habit of placing more goods in the grave and burying the dead with his or her personal outfit permits us to distinguish age, sex, and status categories. Most tumuli contain one burial, which in the case of the elite, is placed in a large wooden chamber. Secondary burials are scarce and restricted to the southern area of the middle Rhine–Moselle region, the Pfalz. The elongated form of many cemeteries; their location on the slopes of, or on the top of, hills (Fig. 4d); and the proximity of old roads (Fig. 4b), all suggest

that the location of barrow cemeteries was consciously chosen. They were very visible in the landscape, both to the inhabitants and to people travelling through the area. Fires in between the graves and an earthen bank at Bescheid point to ritual practices in cemeteries.

The location, number, and content of elite graves in cemeteries vary. Elite graves are seldom isolated; more usually, they are situated among the other graves or grouped away from them. The number of elite graves within cemeteries varies from one (the majority) to three, with some exceptions of more than five elite graves. One example of the latter is the cemetery of Bescheid (Fig. 4b), which seems to consist mostly of elite graves. The large burial chambers and the burnt patches left by the pyres suggest that a proportion of the other graves in the cemetery also belong to the elite category. Also noteworthy is the relationship between the elite graves and the switch to cremation, with Bescheid being one of the first cemeteries to return to this previous burial rite.

The wagons defining the elites in the Late Hallstatt period are replaced in La Tène A by chariots. Horse gear is seldom deposited with the vehicle; it occurs more in the last phase of the Early La Tène period, in La Tène B. The sharp increase in chariot graves is accompanied by a westward extension of the rite from the Middle Rhine over a much greater area; by more conspicuous burial monuments; and by a growing richness of the grave goods, in quantity as well as in quality.

From the Late Hallstatt period onwards bronze vessels were an essential element in the definition of elite identities. In La Tène A, the often-repaired *situlae* were replaced by a more elaborate drinking service composed of imported Mediterranean bronze amphorae, cauldrons, *stamnoi*, jugs, basins and sieves, and by drinking utensils such as pottery bowls or drinking horns. Sometimes bronze vessels had a secondary function as a cremation urn. A common explanation is that the indigenous people did not understand their function and only valued the vessel as an object. However, the combination with other drinking utensils, the traces of wine in one urn, and the corresponding use of locally fabricated pottery vessels as cremation urns, all indicate that the idea of a drinking service did not deviate from that in inhumation graves.

In the course of La Tène A, bronze vessels gained importance in

the materialisation of elite identities and in several elite burials, chariots disappeared from the grave inventory. This shifting emphasis from chariot to valuable objects goes hand in hand with a greater emphasis on personal adornment. Swords, jewellery and clothing accessories are prominent on the body, richly decorated and enhanced with – or made from – luxury materials such as gold, coral, or amber.

In La Tène B, the number of elite graves falls sharply. However, like the previous increase in grave data, this decrease goes hand in hand with changing burial practices. Firstly, the inhumation rite was replaced by cremation. Secondly, the cremated remains were placed in small pits, just below the surface. Thirdly, they were either unaccompanied, or contained only unrecognisable burnt grave goods. Large earthen barrows – sometimes with a stone core and with peripheral structures such as ditches, stone or wooden post circles, or stelae – disappeared. Given the lack of large-scale excavation (only the barrows have generally been excavated, not the space in between) and the probable loss of many shallow burials to erosion, the decrease of grave data must be put into perspective (cf. Miron 1986). Several of the more extensively investigated cemeteries possessed areas with small cremation pits at the periphery (Fig. 4a). This is also the case in northern France, where extensive excavations have resulted in the discovery of small cremation pits, for example at Quilly (Frézouls 1983).

If we compare the definition of elite identities in the three sub-regions of the Marne–Moselle zone, we can see that they differ with regard to the time-span over which the fluctuations in graves and elite burials took place; in density; in the degree of lavishness; in ritual complexity; and in the material forms in which the various identities of the community were expressed and communicated. More striking, however, is the number of characteristics that they have in common:

- The quantity and quality of burial data in the French and German core regions increase from the Late Hallstatt period, with the climax coming during La Tène A, and decrease from La Tène B onwards.
- Vehicles, drinking services and swords represent elite identities.

- In the two core areas, the elite group is bipartite. Certain members of the elite are distinguished by the presence of a vehicle and/or bronze vessels, while the presence of a sword unites the two elite groups.
- Women and children – however much a minority – are also defined as elites (12 elite female graves and three with children are known in the Marne–Moselle region).
- The emergence of elite graves goes hand in hand with the emergence of a new decorative style in La Tène A (the Early Style), developing towards a more flowing and plastic style in La Tène B (the Waldalgesheim Style; Megaw and Megaw 1989).
- The fluctuation in the number of elite graves is part of a more general fluctuation in the quantity and quality of the goods included in burials.
- As well as an increase in the number of graves, new – mostly small – cemeteries are constructed.
- The cemeteries belong to one or several families living in small territories.
- Differentiation in wealth is visible within cemeteries, as well as between them. In cemeteries with several elite graves, the other graves are also more richly equipped.
- Within each region, micro-regional variations exist in the burial rite, the personal outfit of the dead, and the grave offerings.
- The fluctuations in burial data are in broad terms accompanied by changing funerary practices concerning the mortuary rite, the complexity of the rituals, and the conspicuous character of grave monument and contents.

These features imply a segmentary system of small-scale communities, integrated into regional and supra-regional networks activated by the elite. Even though they were prominent in the burial practices, these relationships and the internal differentiation they embodied were, however, not as yet institutionalised in social reality.

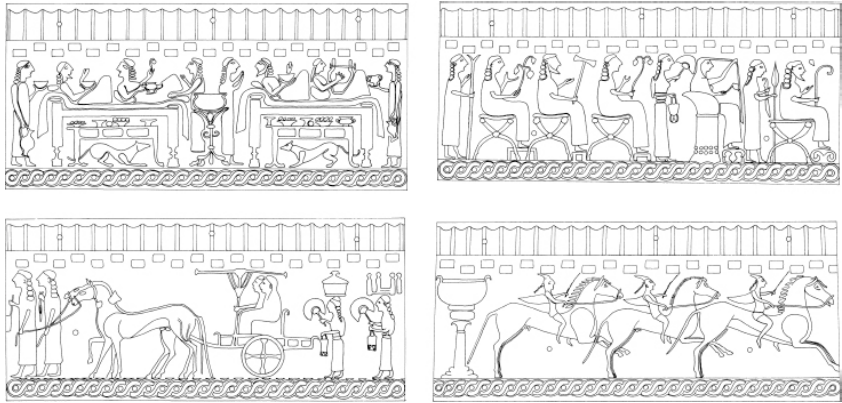


Fig. 5. Earthenware frieze from a monumental building at Murlo, Etruria, sixth century BC (after Bonfante 1981).

The most common explanation for fluctuations in burial data employs a demographic perspective. In the German Eifel, the northern area of the Middle Rhine– Moselle region, ecological research has indicated the regeneration of woodland over formerly arable land (Krausse and Nakoinz 2000). At first glance, this change seems to support the dominant model in which the increase of grave data is explained in terms of colonisation, and the decrease in terms of migration or depopulation. But the coming and going of people is not the only process that can be held responsible for changes in the archaeological data. Other mechanisms such as new socio-ritual practices, the integration of new institutions, or the use of new cultivation techniques, might be responsible for fluctuations in the visibility of archaeological data. Our starting point for explaining the variability of distribution patterns should be people's thoughts and behaviour, especially the meaning of material culture and the role of ritual practices in social organisation.

People, goods and places

In order to bring an indigenous perspective to life, one of the first steps in the interpretation of archaeological data is to search for parameters that transcend the cultural specificity of the material remains of non-modern societies. In my research on the Early La Tène period in the Marne–Moselle zone, three simple questions served as a framework for gaining further insights into the meaning

of goods manipulated in specific circumstances or situations, using a combination of historical and comparative analysis:

- why were these items (vehicles, drinking services and swords) essential for communicating and expressing elite identities?
- why were they deposited in these specific contexts – in graves?
- why, at this particular moment in the history of the inhabitants of the Marne–Moselle zone, were these practices so prominently visible?

Vehicles, weapons, and luxury vessels constituting a drinking service, are common attributes of elite groups through time and space. The repetitive character of this combination is striking. From 3000 BC onwards in the Near East and in the classical world around the Mediterranean, this set of goods – which we can term an elite set – is the material manifestation of leaders in various types of social organisation, from despots or kings to chiefs or heroes. Wagons or chariots, weapons, and drinking services are deposited in graves, in hoards, in sanctuaries, or depicted in scenes from the lives of these elites in parades, wars, games, feasting or symposia according to the social norms and rules relating to that particular cultural context. These representations are found on structures and goods associated with the elite, for example on the walls of their tombs or residences (Fig. 5); on bronze or pottery vessels; and on weapons.

These goods are not restricted to the so-called ‘civilised’ world. In central Europe, this elite set – or its constituent elements – was deposited in graves, bogs, hoards, or sanctuaries from the same early period. Wooden wagon wheels are found in bogs and in graves from the third millennium BC onwards (Piggott 1983), as are luxury pottery vessels and weapons. As a complete set, wagons, weaponry, and luxury vessels occur in graves from the thirteenth century BC, expanding from a core area in southern Germany to include other regions to the west and later also to the east (Pare 1992). The graves in which the elite set was deposited are monumental structures, prominently located in the landscape. They vary from isolated tumuli to tumuli occupying a specific location in a cemetery or between the other graves; and from tumuli with one

central elite grave to tumuli with one or more secondary graves, probably for family members.

The elite set is a material manifestation of socio-ritual practices embedded in structural values of martiality and hospitality. In his writings on the practical art of living, Plutarch shows just how closely martial and hospitable values were linked in Classical society, where they formed the basis of the norms directing elite behaviour (*Moralia* 9): ‘the same man must show his most fearsome side at the battle front and his most pleasant side at the banquet’, followed by a statement of Homer, that ‘these are the men who are fitted for leadership’. These two aspects – eating/drinking and fighting or other forms of competition by means of chariots, horses or weapons – are also often found together in the iconography of the Classical world (see [Fig. 5](#)).

Each component of the elite set plays a role in ritual practices. Vehicles can function in war scenes, in races, or in ceremonial parades (amongst other things in funeral processions). Weapons figure in depictions of war, of hunting parties, as prizes in games (like vessels, see [Fig. 5](#)), as paraphernalia hanging on walls, or attached to the body. Vessels play a part in the reception of a leader, in communal feasts (again among other things during mortuary rituals), or in communal drinking parties, in which the symposium with a peer group must be distinguished from a feast or banquet uniting a chief or king and his retainers. These practices and their ‘ritual condensation’ (Leach 1976) in graves, hoards or sanctuaries, are a medium for the expression and communication of – but at the same time for the creation and confirmation of – the position of elites in the social organisation.

Weapons and ‘war chariots’ in graves do not necessarily imply a warrior society (*contra* e.g. Nash 1985), any more than drinking services point to professional drinkers. Although this is not to deny that the weapons and drinking services were indeed used, the presence of the elite set is the material expression of processes of social interaction. Vehicles, weapons, and vessels represent meaningful behaviour, according to the rules and regulations of society. These goods become bound up with the identities of persons and groups (Weiner 1992) and with ritualised practices. In other words, they are the objectification of a network of inter-

relationships between people, goods and places that is constantly being (re-) negotiated (Thomas 1991). From a symbolic perspective, the elite set belongs to the *longue durée*. From a social perspective, the reinterpretation and appropriation of the structural values of the conceptual universe is culturally specific. The striking similarities in the definition of elite identities find their origin in this common structural basis, the various ways of giving form to these values being structural transformations of one another.

This brings us to the second question. Why does the elite set come to exemplify social inter-relationships in burials at specific moments in human history? Mortuary rituals are of vital importance for communities in creating a balance between the transcendental, imperishable order, and mortal individuals (Bloch and Parry 1982; Metcalf and Huntington 1991; Parker Pearson 1999). Cemeteries are a manifestation of the permanence of the social order, linking the past with the present and the future. The accentuation of certain domains of human practice by monumental structures – in this case the relationship between the dead and the living – is meaningful. The landscape is constructed through the activities of people (Ingold 1993); visible funerary monuments not only structure the world within which people act, but also the people themselves.

Cemeteries are social and territorial markers, creating historical roots legitimising the internal order, as well as the community's place on a larger scale. Through the deposition of 'inalienable possessions' (Weiner 1992) in graves, social inter-relationships within the community, and their place in the surrounding landscape, are created and maintained. In the Aisne–Marne region in the Early La Tène period, the constitutive meaning of burial places is accentuated by linking cemeteries to older grave monuments; by replacing body parts in graves in newly constructed cemeteries; by secondary burials in older graves; and by the violation of graves, especially of the elite, shortly after burial. Destroying graves is a well-known mechanism in attempts to evict people from their land by denying their historical roots, as we have seen happen in our own day in the former Yugoslavia.

Fighting, feasting, games, parades, burials, and marriages are all mechanisms through which people and goods are entangled. These practices are embedded in structural principles directing ethical,

moral and social dispositions, laying down the rules for behaviour, but leaving space for individuals or groups to deviate in time, context, and form (Bourdieu 1977). These practices are not a calculated act of elite groups aiming, for example, at the acquisition of power (positions), but a reinterpretation and appropriation of structural values known and supported by all members of the community.

Fighting, feasting, and mortuary practices are arenas of symbolic violence in which social cohesion, as well as internal hierarchy, is established and confirmed in daily practice. For example in feasts, social relations are given form through the greeting ceremony, the place of the individual at the table, the manner of serving, the part of food allocated, and so on. Social transformations might follow, when practices, positions, or institutions become institutionalised in the course of time through the repetitive character of the means of reproduction of the social order (Giddens 1984). From this point of view, the nature and scale of the reproductive mechanisms – made archaeologically visible by their sumptuousness – might in fact mask their social importance at certain moments in history. It is not necessarily an exclusive competition for individual power that is at stake. By means of mortuary rituals and burial practices in which various identities are distinguished, the membership of a society constitutes itself as a whole.

What authority or power leaders had, and what is chosen as the arena for symbolic violence, is highly dependent on the social organisation and specific cultural context. This leads us to two final questions. Why are elite graves so prominent in the Marne–Moselle zone in the Early La Tène period? Is the instrumentality of mortuary rituals – especially burial practices – in the reproduction of the social order, the mechanism responsible for the increase, as well as the decrease, in burial data? To answer these questions we must return to the burial data, but only after first examining other relevant archaeological evidence.

Elite identities and society

Until comparatively recently, archaeological research in the Marne–Moselle zone focused on burials, due both to the visibility of the barrows and the richness of their contents. Whilst abundant, the

ensuing data are not always complete or reliable, particularly for material collected in the nineteenth century (Verger 1994). In contrast, settlement evidence is relatively scarce in all three regions and little is known about the size and internal structure of dwelling sites, because until recently there were few large-scale excavations. On analogy with neighbouring areas, a diffuse settlement pattern with farmsteads occupied only for a single generation – the so-called ‘wandering’ farmsteads – has often been assumed.

It is now apparent, however, that in the Aisne–Marne region, enclosed settlements with farmhouse, small outbuildings and storage pits dug into the chalk – which were once thought to belong exclusively to the Later Iron Age – were already in existence by the Early La Tène period. Aerial photography has dramatically increased the number of these *fermes indigènes*. Some farmsteads were occupied for long periods, sometimes covering the whole of the Iron Age (Villes 1995). The continuity of location and the enclosure of the farmyard with ditches or palisades together contradict the idea that the Early La Tène settlement pattern was dominated by single phase sites. The greater visibility of these enclosed farms and recent rescue excavations in advance of development, for example in the Aisne valley (Pion 1990), have resulted in an increase of settlement data which helps to balance the decrease in burial data at the end of Early La Tène and in the Middle La Tène period.

In the middle Rhine–Moselle region, settlement research has focused on fortifications (Nortmann 1991). Most of the relevant sites were frequented in the Late Hallstatt period, but they cannot be defined as fortified dwelling places, because house plans are scarce. In the Early La Tène period, they played no role, with the exception of certain fortifications on the periphery of the region. We may conclude therefore that the use of hillforts alternates with the employment of increasingly ostentatious burial practices. In the Middle La Tène period, however (in many cases starting at the end of Early La Tène), fortifications were built once more. These so-called *oppida* are different in character from their predecessors: they are large defended settlement complexes, containing various types of houses, production centres, and sanctuaries.

The elite of the Marne–Moselle zone were no kings or princes.

They lived with their families (in the widest sense) in small territories of 15 to 20 km² in extent. Despite the marked increase in burials, not all the dead were buried in cemeteries, even in La Tène A. Children's graves in particular are lacking and estimates of the overall population size will be too low. The construction of small new burial grounds and the increase in the number of graves during La Tène A can be explained by the extension of the burial rite to a larger section of the community.

The increasing number of formal burials in cemeteries might be the result of a growing population and the fission of family groups, but this is not necessarily a reason for there to have been a change in burial rite. Perhaps the accompanying social stress and/or social transformation was responsible for the growing complexity of burial practices? Recent discoveries in France seem to imply that the single-phase farming settlements of the preceding period were gradually transformed into enclosed farmsteads occupying fixed locations, and even small villages. If this hypothesis is correct, this could have entailed the development of better fertilising methods and eventually a diminution in the extent of arable fields.

The historical roots of these local communities were created and confirmed by the construction of cemeteries, starting with the deposition of the bones of ancestors (as secondary burial rituals in the French core area show); with a founder (elite) grave, as for example at Bell in the middle Rhine–Moselle region; or with the linking of graves to older monuments dominating the landscape, as at Manre and Aure in the Aisne–Marne region. In the German core area, the move away from socio-ritual practices which reproduced the community as a whole at the Late Hallstatt hillforts, to practices which reproduced both the individual community and society on a regional scale through its constituent elements, points to changes in social structure.

In all three regions, the variable degree of wealth in graves is striking. Apart from chariots, luxury vessels and swords, the differences in the funerary assemblages are often subtle. The horizontal differentiation between families – together with the further differentiation within the elite group (between those with chariots and/or valuable bronze vessels and swords, and those buried with swords only) – suggests a gradual transformation

towards hereditary structures organised through client relations. The hypothesis obtains further support from the existence of elite graves of children and women, and the evidence for exchange networks linking the elites across large parts of Europe. In clientage systems, marriages are a strategic means of linking family groups. This might explain the presence of women with the same elite paraphernalia as men (except for weapons), emphasising their position in the community. It is also primarily due to the choice of criteria defining the elite that women are not more obvious in the record. In cemeteries with chariot and/or sword graves, many female and child burials include rich goods of other kinds, mainly luxury jewellery, clothing accessories, and pottery vessels.

The supra-regional character of several of the elite indicators attests the expansion and intensification of elite networks, resulting in the expression of a more formalised group identity in later periods. The Early La Tène decorative style found on elite material culture expanded rapidly over large parts of Europe. In contrast to the individual luxury goods of the Late Hallstatt *Fürsten*, or the situlae belonging to the Late Hallstatt/Early La Tène transition in the Marne–Moselle zone, the drinking service became a standardised set in La Tène A. The main elements are vessels for storing, preparing, pouring, and drinking the liquid. Items in the first three categories – the utensils handled by the host – are often imported, whereas the drinking vessels, whether bowls or horns, are nearly always local.

This shows that Mediterranean habits were not indiscriminately copied, but that the transalpine elite made conscious choices from the repertoire of Mediterranean elite goods. Candlesticks, perfume burners, fans, firedogs, and furniture are completely absent from the Marne–Moselle zone. Moreover, some imported bronze elements of drinking services are decorated in an indigenous style, or are replaced by indigenous forms, highlighting active appropriation of foreign goods and their incorporation into local practices. This also illustrates changing values in the cultural biography of things (Kopytoff 1986). The situlae, which were often repaired, draw attention to a history of intensive circulation within the community, whilst the imported bronze vessels emphasise the creation of regional and supra-regional networks and newly established

external relationships.

The growing formalisation of elite identities is visible in other domains, such as clothing accessories and weapons. In the Late Hallstatt and Early La Tène periods, swords and daggers are generally unique items, both in form and decoration (Fig. 6 a–l). This – and the fact that in one grave the sword was part of the personal outfit of a boy (Hoppstädten 1) – allows us to reject the idea that the presence of weapons indicates a warrior society. From the end of Early La Tène, length, form and decoration became more and more standardised. The favourable soil preservation conditions in northern France help illustrate this development. The so-called Hatvan Boldog sword types with the *lyre zoomorphe* – a form of decoration comprising stylised opposed griffon- or dragon-pairs below the mouth of the scabbard (Fig. 6j–l) – are now found over large parts of Europe.

In the Middle to Late La Tène period (250–50 BC), the standardisation extends to the whole weapon set. The same basic combination of equipment – sword, lance, and shield – is found over large areas of Europe (Rapin 1991). It would be interesting further to investigate the symbolic meaning of weaponry at this period. Does weaponry still materially define the identity of a now more institutionalised elite group or class, or does it now relate to a specific function in a transformed society?

The *oppida* possess the same inter-regional character and cover a similar geographical area. They point to a transformed society in which social differentiation is institutionalised; in which clientage relations structure the life of individuals, families and tribes, as we know from Caesar's account; in which a monetary system emerges; and in which social, religious and economic domains seem less intertwined than before. Conspicuous burials are still present, but in smaller numbers than in the Early La Tène period. They are again variations on the same theme, based on the same structural principles as before: chariots, luxury vessels (now including Roman imports for storage, preparation and pouring of wine) and weapons comprising the elite set.

These elements are, however, also now found in settlements and in sanctuaries, both of which have a more permanent and monumental character in this period. In the Middle and Late La

Tène sanctuaries of northern Gaul, the link with the past is clearly visible:

- the same elements of the elite set, especially weapons, were deposited;
- swords, lances and shields received the same ritual destruction as was meted out to the weapons present in Late Hallstatt and Early La Tène graves (Fig. 6a, d);
- body parts were manipulated in the same way as in Early La Tène graves in France, for example at Ribemont-sur-Ancre (Brunaux 1995);
- the rectangular plan of the enclosures referenced the ditches surrounding Early La Tène graves and even older monuments.

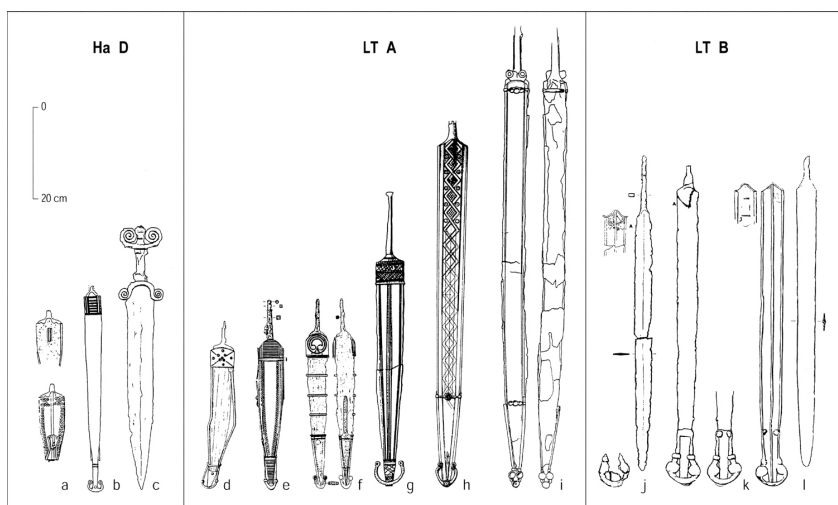


Fig. 6. Daggers and swords from the Late Hallstatt, La Tène A and La Tène B periods in the Aisne–Marne region: a. Châlons-sur-Marne, no context (NC); b. Chouilly J82; c. Heilz l'Evêque 26; d. La Croix-en-Champagne (NC); e. Vraux; f. Bouy V1880.1.r; g. St-Jean-sur-Tourbe (NC); h. Vert-Toulon (NC); i. Somme-Bionne HM; j. Vert-Toulon 3; k. Oiry 1; l. Juvigny (NC) (after Lepage 1966; Kruta 1983; Charpy 1987; Ginoux 1994).

Thus in this society with more institutionalised social differentiation, other mechanisms and arenas of symbolic violence have (partly) replaced the burial practices of the Early La Tène period.

The developments in the Marne–Moselle zone were not an isolated phenomenon. Over large parts of Europe the same trend is visible. There was, and always had been, continuous contact and exchange between the different continental communities, which influenced each other through dynamic processes in which ideas, people and material phenomena were entwined. Contrary to current interpretations, I would not explain the decrease in the number of elite burials as decentralisation, collapse or devolution, but as the transition to another social order. The conspicuous burial practices and new exchange relations of the Early La Tène period in the Marne–Moselle zone were agents in the creation and formalisation of inter-relationships within a transformation process leading towards a society in which the hierarchical relations within and between families were more institutionalised and integrated into extensive client networks.

Social processes and fluctuations in archaeological data

A large number of variables (demographic, social, religious, economic, technical) interact in daily practice. One variable alone is never the trigger for social change. Economic resources and exchange relations are important aspects of social life at all times and in all places. They do not, however, explain the emergence of elite graves at this particular moment in the Marne–Moselle zone. The key lies in the specific needs and receptiveness of the social group, living according to its ‘constraining and enabling’ structural norms and values.

This requires us to adopt an analytical framework uniting long-term and culturally specific processes in cycles of interaction. Changes in dominating elements in the landscape may provide information on alterations to the way people perceived their natural and social environment, because archaeological patterns are the materialisation of ongoing processes within societies, the outcome of cycles of negotiation and reordering of the social order. In interpreting fluctuations in archaeological data, indigenous activities should be at the centre of our reconstruction, but we must avoid the pitfalls of teleological reasoning. The outcome of people’s activities is not necessarily what they are aiming at. Society can change bit by bit through the interaction of various domains in

daily practice, until 'transformation points' are reached through the routinised intersections of these practices (Giddens 1984). Thereafter, structural relations become institutionalised, as are the mechanisms for maintaining these relations. New social structures acquire new mechanisms of reproduction, always embedded in structural principles, the long-term norms and values, which change slowly.

To summarise the archaeological discourse as a dichotomy of an 'old discontinuity paradigm versus a new continuity paradigm' (Krause and Nakoinz 2000) is erroneous. The fundamental problem dividing the two interpretations is the approach to material culture. Data are never false; they do not have an intrinsic value and meaning. Objects, especially in ritualised contexts, are formed by a twofold selection of the repertoire of goods. In the first place, the people who are the object of our study select the goods for specific deposits, often contexts in which imperishable objects resist the ages. In the second place, our data are a selection (or multiple selection; Shanks and Tilley 1987) shaped by the archaeological paradigms determining our research questions and methods. We need to reflect on the meaning of the visibility and invisibility of people's activities in the past, as well as on archaeological practice, in order to reveal the assumptions implicit in different models and theories. Comparing archaeological patterns on a larger scale, in time as well as in space, can provide far better insights into the essential elements of material culture distributions and the contexts in which items were deposited (cf. Dietler 1995).

Explanations of discontinuities in archaeological data based on static social constellations, and linked mechanically and causally with movements of people, tend to ignore the invisible: the motives behind people's actions; and the values directing their activities and shaping and giving meaning to the landscape in which they dwell, work and worship. Places are not vehicles carrying meaning, which can easily be picked up, but are keys to meaning (Ingold 1993). It is not my aim here to preach continuity, but rather to put into perspective archaeological patterns, and to propose an alternative, more dynamic explanatory framework that does greater justice to the creativity of people interacting with their social, natural and supernatural environment.

Bibliography

- Bintliff, J. 1984. Iron Age studies in the context of social evolution from the Bronze Age through to historic times, in J. Bintliff (ed.), *European Social Evolution. Archaeological Perspectives*, 157–225. Bradford: University of Bradford Press.
- Bloch, M. and Parry, J. 1982. Introduction, death and the regeneration of life, in J. Parry and M. Bloch (eds), *Death and the Regeneration of Life*, 1–44. Cambridge: Cambridge University Press.
- Bonfante, L. 1981. *Out of Etruria*. Oxford: British Archaeological Reports International Series 103.
- Bourdieu, P. 1977. *Outline of a Theory of Practice*. Cambridge: Cambridge University Press.
- Brun, P. 1993. La complexification sociale en Europe moyenne pendant l'Âge du Fer: essai de modélisation, in A. Daubigny (ed.), *Fonctionnement social de l'Âge du Fer. Opérateurs et hypothèses pour la France (Table ronde internationale de Lons-le-Saunier (Jura) octobre 1990)*, 275–290. Lons-le-Saunier: Centre Jurassien du Patrimoine.
- Brunaux, J.L. 1995. Die keltische Heiligtümer Nordfrankreichs, in A. Haffner (ed.), *Heiligtümer und Opferkulte der Kelten*, 55–74. Stuttgart: Sonderheft Archäologie in Deutschland.
- Cahen-Delhay, A. 1999. Tombes à char du Ve siècle en Ardenne belge, in A. Villes and A. Bataille-Melkon (eds), *Fastes des Celtes entre Champagne et Bourgogne au VIIe – IIIe siècles avant notre ère*, 391–410. Joué-les-Tours: Mémoire de la Société Archéologique Champenoise 15.
- Charpy, J.J. 1987. Les épées laténiennes à bouterolle circulaire et ajourée des IVe et IIIe siècles avant J.-C. en Champagne, *Études Celtiques* 24, 43–102.
- Chossenot, D., Neiss, R. and Sauget, J.M. 1981. Fouille de sauvetage d'une nécropole de La Tène I à Vrigny (Marne), in V. Kruta (ed.), *L'Âge du Fer en France septentrionale*, 131–150. Reims: Mémoire de la Société Archéologique Champenoise 2.
- Cunliffe, B. 1994. Iron Age societies in western Europe and beyond, 800–140 BC, in B. Cunliffe (ed.), *The Oxford Illustrated Prehistory of Europe*, 336–372. Oxford: Oxford University Press.
- Demoule, J.P. 1999. *Chronologie et société dans les nécropoles celtiques de la culture Aisne-Marne, du VIe au IIIe siècle avant notre ère*. Amiens: Revue Archéologique de Picardie numéro spécial 15.
- Desenne, S. and Guichard, G. 1993. Bucy-le-Long "La Héronnière", *Bilan Scientifique Picardie* 1993, 44–45. Amiens: Service Régional de l'Archéologie.
- Diepeveen-Jansen, M. 2001. *People, Ideas and Goods. New Perspectives on*

'Celtic Barbarians' in *Western and Central Europe*. Amsterdam: Amsterdam Archaeological Studies 7.

Dietler, M. 1989. Greeks, Etruscans and thirsty barbarians: early Iron Age interaction in the Rhône basin of France, in T.C. Champion (ed.), *Centre and Periphery: Comparative Studies in Archaeology*, 127–141. London: Unwin Hyman.

Dietler, M. 1995. Early "celtic" socio-political relations: ideological representation and social competition in dynamic comparative perspective, in B. Arnold and D.B. Gibson (eds), *Celtic Chieftdom, Celtic State*, 64–71. Cambridge: Cambridge University Press.

Eiden H. 1982. Wallanlage der späten Hallstattzeit bei St. Goarshausen, in H. Eiden, *Ausgrabungen an Mittelrhein und Mosel 1963–1976*, 9–13. Trier: Trierer Zeitschrift Beiheft 6.

Frankenstein, S. and Rowlands, M.J. 1978. The internal structure and regional context of early Iron Age society in south-western Germany, *Bulletin of the Institute of Archaeology of London* 15, 73–112.

Frézouls, E. 1983. Quilly, *Gallia* 41, 358–361.

Giddens, A. 1984. *The Constitution of Society. Outline of the Theory of Structuration*. Cambridge: Polity Press.

Ginoux, N. 1994. Les fourreaux ornés de France du Ve au IIe siècles avant J.-C., *Études Celtiques* 30, 7–86.

Haffner, A. 1976. *Die westliche Hunsrück-Eifelkultur*. Berlin: Römisch-Germanische Forschungen 36.

Haffner, A. 1992. Die keltischen Hügelgräber des Mittelrheingebietes, in R. Cordie-Hackenberg, R. Geisz-Dreier, A. Miron and A. Wigg (eds), *Hundert Meisterwerke keltischer Kunst*, 31–61. Trier: Schriftenreihe des Rheinisches Landesmuseums Trier 7.

Härke, H.G.H. 1979. *Settlement Types and Settlement Patterns in the West Hallstatt Province*. Oxford: British Archaeological Reports International Series 57.

Ingold, T. 1993. The temporality of the landscape, *World Archaeology* 25, 152–174.

Kimmig, W. 1983. Die griechische Kolonisation im westlichen Mittelmeergebiet und ihre Wirkung auf die Landschaften des westlichen Mitteleuropa, *Jahrbuch des Römisch-Germanischen Zentral-museums Mainz* 30, 5–78.

Kopytoff, I. 1986. The cultural biography of things: commoditization as process, in A. Appadurai (ed.), *The Social Life of Things*, 64–94. Cambridge: Cambridge University Press.

Krausse, D. and Nakoinz, O. 2000. Binnenkolonisation und Zentralisation. Überlegungen zur latènezeitlichen Besiedlungs- und Bevölkerungsentwicklung im Mittelgebirgsraum nordwestlich der Mosel,

- in V. Guichard, S. Sievers and O.H. Urban (eds), *Le processus d'urbanisation à l'âge du Fer. Eisenzeitliche Urbanisationsprozesse*, 127–140. Glux-en-Glenne: Collection Bibracte 4.
- Kruta, V. 1983. Deux fourreaux marniens décorés du Ve siècle avant notre ère, *Études Celtiques* 20, 23–41.
- Lambot, B. 1996. *Cartes postales aériennes de Champagne-Ardenne*. Reims: Mémoires de la Société Archéologique Champenoise 11.
- Lambot, B. and Verger, S. 1995. *Une tombe à char de La Tène ancienne à Semide (Ardenne)*. Reims: Mémoire de la Société Archéologique Champenoise 10.
- Leach, E. 1976. *Culture and Communication*. Cambridge: Cambridge University Press.
- Leman-Deliverie, G. and Beaussart, P. (eds) 1990. *Les Celtes en France du Nord et en Belgique. VIe–Ier siècle avant J.-C.* Valenciennes: Musée des Beaux Arts.
- Lepage, L. 1966. Le cimetière Hallstatt de Charvais à Heilz-L'Evêque, *Revue Archéologique de l'Est et du Centre-Est* 57, 70–87.
- Megaw, R. and Megaw, V. 1989. *Celtic Art*. London: Thames and Hudson.
- Metcalfe, P. and Huntington, R. 1991. *Celebrations of Death: the Anthropology of Mortuary Ritual* (2nd edn). Cambridge: Cambridge University Press.
- Miron, A. 1986. Das Gräberfeld von Horath, *Trierer Zeitschrift* 49, 7–198.
- Mohen, J.P., Duval, A. and Eluère, Ch. (eds) 1988. *Les princes celtes et la Méditerranée*. Paris: La Documentation Française.
- Nash, D. 1985. Celtic territorial expansion and the Mediterranean world, in T.C. Champion and J.V.S. Megaw (eds), *Settlement and Society*, 45–68. Leicester: Leicester University Press.
- Nortmann, H. 1991. Die eisenzeitlichen Burgwälle des Trierer Landes, in A. Haffner and A. Miron (eds), *Studien zur Eisenzeit im Hunsrück-Nahe-Raum*, 121–140. Trier: Trierer Zeitschrift Beiheft 13.
- Pare, C.F.E. 1991. Fürstensitze, Celts and the Mediterranean world: developments in the West Hallstatt culture in the 6th and 5th centuries BC, *Proceedings of the Prehistoric Society* 57, 183–202.
- Pare, C.F.E. 1992. *Wagons and Wagon-graves of the Early Iron Age in Central Europe*. Oxford: Oxford University Committee for Archaeology Monograph 35.
- Parker Pearson, M. 1999. *The Archaeology of Death and Burial*. Gloucester: Sutton.
- Piggott, S. 1983. *The Earliest Wheeled Transport from the Atlantic Coast to the Caspian Sea*. London: Thames and Hudson.
- Pion, P. 1990. De la chefferie à l'état? Territoires et organisation sociale dans la vallée de l'Aisne aux Ages des Métaux (2200–20 av. J.-C.), in

- Archéologie des espaces*, 183–260. Juan-les-Pins: Editions APDCA.
- Rapin, A. 1991. Weaponry, in V. Kruta, O.-H. Frey, B. Raftery and M. Szabó (eds), *The Celts*, 321–331. London: Thames and Hudson.
- Shanks, M. and Tilley, C. 1987. *Re-constructing Archaeology*. Cambridge: Cambridge University Press.
- Termote, J. 1990. Un site fortifié de l'Age du Fer à Kooigem, Commune de Courtrai (Flandre Occidentale), in Leman-Delerive and Beaussart 1990, 43–46.
- Thomas, N. 1991. *Entangled Objects. Exchange, Material Culture and Colonisation in the Pacific*. Cambridge and Massachusetts: Harvard University Press.
- Tierney, J.J. 1959–60. The Celtic ethnography of Posidonius, *Proceedings of the Royal Irish Academy* 60, Section C, 189–275.
- Van Doorselaer, A. 1990. Le Mont Kemmel, une fortification celte, in Leman-Delerive and Beaussart 1990, 39–42.
- Verger, S. 1994. *Les tombes à char de La Tène ancienne en Champagne et les rites funéraires aristocratiques en Gaule de l'Est au Ve siècle avant J.-C.* Unpublished Ph.D. thesis, Université de Bourgogne.
- Villes, A. 1995. A propos des mouvements celtiques au Ve–IIe siècles: confrontations habitats et nécropoles en Champagne, in J.J. Charpy (ed.), *L'Europe celtique du Ve au IIIe siècle avant J.-C. Contacts, échanges et mouvements de populations*, 125–160. Sceaux: Mémoire de la Société Archéologique Champenoise 9.
- Weiner, A.B. 1992. *Inalienable Possessions: the Paradox of Keeping-while-giving*. Berkeley: University of California Press.

Boundaries and identity in Early Iron Age Europe

Peter S. Wells

Introduction

Recent research in Iron Age Britain has emphasised the importance of boundaries, especially in the context of settlements, not just as parts of military defences, but as means of communicating information about self and other, about identity (e.g. Bowden and McOmish 1987; Hingley 1990; Hill 1995; Parker Pearson 1996; Bevan 1997; Thomas 1997; Haselgrove *et al.* 2001). These studies raise important questions about fundamental differences between the ways that communities during the Iron Age created their cultural landscapes and understood themselves in relations to others, and the ways that their predecessors had done. In this paper I wish to build on these advances in method and theory to explore similar issues in the part of Europe with which I am most familiar – the central region of the Continent. A question that lies behind this investigation is, were essentially similar changes happening in Britain and on the Continent at roughly the same time, or were the processes and their results fundamentally different? In other words, can we propose a general pattern of change with respect to boundaries for Europe as a whole during the Early Iron Age, or was each region so different that no broad generalisation is possible?

There are good reasons to suppose that the changes in the different parts of Europe were interrelated. As I have argued elsewhere (Wells 2001, 42–5), there was a great deal more mobility in late prehistoric Europe than most discussions of contact and change imply. The ‘imports’ from the Continent of Early Iron Age date in Britain (Cunliffe 1991, 405–34), and the British craft

products that indicate an awareness of continental forms (Jope 2000, 10–16), suggest that many people were moving across the Channel and bringing things with them. With the transmission of goods we can expect the passage of information and ideas as well. There is thus every reason to think that developments on the Continent affected processes in Britain, and that changes in Britain had impact on what was happening on the Continent. The issue is, what can the archaeological evidence tell us about the character and significance of the changes involved?

Boundary – definition

A striking feature of the Early Iron Age in temperate Europe is the increased emphasis on boundaries recognisable in the archaeological record. I expand on this familiar theme to include patterning in ornament and the use of figural representation. For this discussion, I understand boundary in three different but related senses.

A boundary can be a geographical feature to divide space. Examples include ditches, palisades, and walls around settlements, and divisions between groups of graves in cemeteries, especially at the edges of burial mounds but also ditches that separate one group of graves from another. A boundary can also be a dividing line on a field of ornament, as when an incised line on a flat bronze surface or on a ceramic vessel separates one design from its neighbour. Finally, a boundary can be created through activity or practice, for example between a community that produces figural representations and one that does not.

Boundaries and identity

Boundaries separate one thing from another. When people dig a ditch around their dwelling place or erect a palisade, they create a division between the settlement and everything that is outside. When one group buries its dead in a tumulus, it separates them from all others by enclosing them within the perimeter of the mound. Such boundaries are physical manifestations of feelings of identity among the members of a group, distinguishing them as a unit from other groups. Through use, boundaries become active agents that represent, express, and emphasise those feelings of

identity (see below). Such identity operates on many different levels – individual, family, community, region, and so forth.

It is important that we consider the evidence and its implications in the context of living societies, not just as the archaeological remains that we uncover through excavation. We must think about how people created, used, and responded to the boundary structures that surrounded their settlements and burials, the divisions patterned in their ornaments, and new practices of representation. A settlement plan that maps results of archaeological excavation is static. But to understand the interplay between boundaries and identity, we need to envisage the settlements in the context of the living communities that resided in them, with all of the activity that took place in and around them. Every movement into and out of a settlement required passing through the entrance – through the boundary. People went out of their settlements daily to work in their fields, tend livestock, and gather firewood. They also left to visit other communities, collect materials for crafts such as clay for making pots, and perhaps to go on trading expeditions. Visitors entered settlements from outside, including family members from other settlements, merchants peddling their wares, pilgrims en route to religious sites, and probably occasionally regional chiefs, robbers, and raiders. Such mobility was an important feature of the Early Iron Age throughout much of Europe.

In the same way, we need to think of burials, not just as structures to accommodate the dead and as arrangements of objects to accompany the remains, but as parts of funerary rituals, in which the performers acted out specific practices and used the objects that we recover today to convey particular meanings to the participants and observers.

Designs on crafted objects, including the patterned ornament on belt plates, dagger sheaths, and pottery were meant not only to fill empty spaces, but also to communicate information about the identities of the wearers and users (Pauli 1978; Sørensen 1997). As with the boundaries around settlements and burial monuments, here too, the relation between users and material culture was reflexive. Designs expressed identities, and at the same time they were agents that conveyed and strengthened those feelings of identity for the users. Similarly in the case of the new figural

representations of the Early Iron Age, we need to understand these not just as reflections of ideas and themes, but as media that communicated information and created meanings.

Boundaries in Early Iron Age Europe

Many communities in temperate Europe between the eighth and fifth centuries BC structured their world in ways that were different from those of their ancestors of the preceding centuries. In this section, I cite a few specific examples in order to illustrate the general points.

Settlements

During the past several decades, our knowledge of settlements has grown rapidly as the result of large-scale rescue excavations throughout Europe. Although rescue research does not always permit thorough investigation of complete settlements, it frequently enables the exploration of settlement boundaries. From this work, and from the increased use of aerial reconnaissance, it is apparent that a large proportion of Early Iron Age settlements were bounded by ditches and/or palisades.

In our excavations at Hascherkeller in Lower Bavaria (Fig. 1), we explored portions of two enclosures that formed part of a three-enclosure complex on the edge of the loess terrace overlooking the broad valley of the River Isar at Landshut (Wells 1983). The enclosed areas measured about 55 metres across – a size that is common for enclosed settlements throughout temperate Europe. In one portion of a ditch we were able to identify post holes, indicating that a palisade of posts about 14 cm in diameter had surrounded the settlement enclosures. Enclosures similar to those at Hascherkeller, occupied at the end of the Late Bronze Age and beginning of the Early Iron Age, are well represented throughout much of central Europe (Leidorf 1985; Rieckhoff and Biel 2001).

Nagler-Zanier's (1999) recent excavation and analysis of the Early Iron Age settlement of Geiselhöring on the Kleine Laaber River, also in Lower Bavaria, provide a detailed view into processes of boundary definition through time. She identifies four structural phases during the life of the settlement, about 750 to 625 BC. In the first phase of occupation, several dwellings on the site were

separated from one another by small fences set in ditches. In the second phase, a single, deeper and wider ditch enclosed the settlement, which was now made up of multi-building farmsteads that show increasing differences in wealth. The third phase included a new, larger enclosure, with fewer farmsteads inside it. Important is the observation that the larger enclosure required a considerably greater investment of labour than the previous enclosing ditches. This greater investment for a structure that incorporated fewer people suggests that an individual or family was acquiring greater power over others. In the fourth phase, Nagler-Zanier notes evidence for a greater emphasis placed on the appearance of the enclosure. Now four large semicircular structures that she calls bastions were erected alongside the ditch, indicating a much more substantial and visually formidable boundary. According to her analysis of the post holes and ditches, the builders of this complex placed much greater emphasis on creating a particular appearance for people approaching the site. Large structures inside made a striking impression, and the walls ensured that the interior area of the settlement remained unseen by approaching visitors.

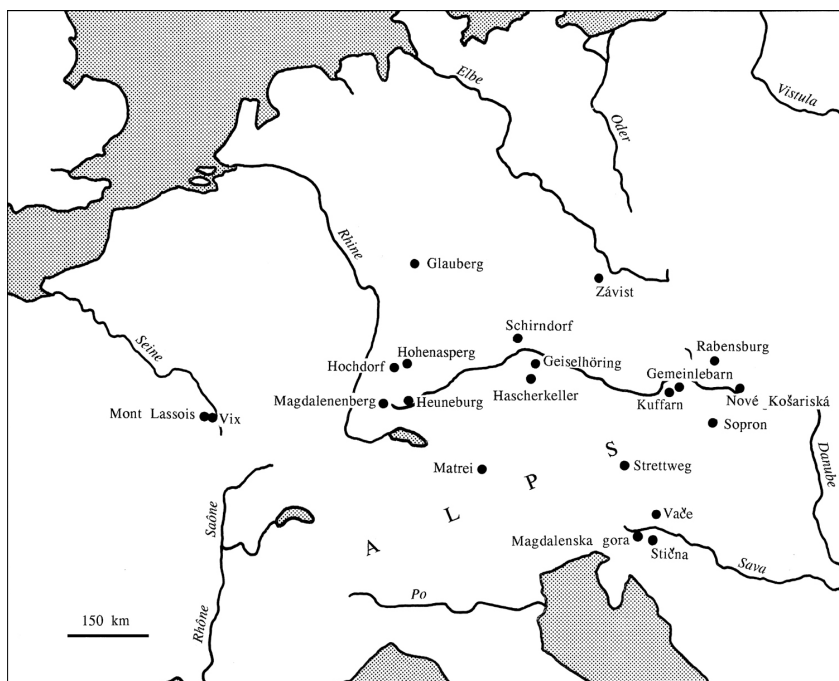


Fig. 1. Map showing sites mentioned in the text.

This analysis at Geiselhöring provides a detailed view into the process of boundary definition in relation to greater differentiation in Early Iron Age society. This process was contemporaneous with other major changes. One was expansion of the practice of outfitting a small proportion of burials with lavish goods and placing them in oak chambers under mounds – the so-called *Fürstengräber*. Another was the beginning of regular interactions with Mediterranean societies that included the transmission northward of Attic pottery, Greek and Etruscan bronze vessels, and other luxury products that we find in rich graves throughout much of temperate Europe. Nagler-Zanier's analysis of the visual effects of the phase four settlement at Geiselhöring on visitors is particularly important, since that structure emphasises social and political aspects of coming and going, and not just the daily routine of movement from settlement to field and back.

As many investigators have noted recently (e.g. Bevan 1997; Thomas 1997), we need to think about the role of ditches, fences, and walls as visual representations of property, status, power, and identity. Hascherkeller and Geiselhöring are among hundreds of typical enclosed Early Iron Age settlements that have been identified. Larger and more complex communities developed during this period, such as at the hilltop sites of Mont Lassois in eastern France, the Heuneburg in southwestern Germany, and Závist in Bohemia. Early in the excavations at the Heuneburg, investigators called attention to the display aspect of the extraordinary clay-brick wall surrounding the site, with its bastions looming over the open settlement below the fortified plateau (Kimmig 1983).

Cemeteries and funerary ritual

The character of burial practice during the Early Iron Age emphasised boundaries and distinctions much more strongly than during the Late Bronze Age. In central regions of temperate Europe, Late Bronze Age burial was predominantly by cremation and placement of cremated bone and ashes in an urn or in a pit in the ground. Graves often formed cemeteries of tens or hundreds of graves known as urnfields (Harding 2000). The great majority of

burials were outfitted only with modest goods; substantial chambers and above-ground monuments were exceptional. Although there were probably some kind of markers such as posts on top of graves, these have not survived the passage of time. A small number of unusually richly outfitted burials – precursors to the patterns of the Early Iron Age – contrast with the general practice.

In the Early Iron Age, tumulus burial became standard in most of temperate Europe. Early in the period, tumuli for individuals were common, later, communal tumuli became more numerous, but there was always considerable regional variation. Many thousands of Early Iron Age burial mounds are still identifiable in the European landscape, and research has long focused on excavation of these monuments. Investigations at a number of sites have shown that many people were buried in flat graves unmarked by mounds, indicating a significant spatial distinction between those buried under tumuli and those interred in the open.

Whereas the Late Bronze Age urn cemeteries in central Europe rarely show divisions within them, in Early Iron Age cemeteries, the mounds form clear boundaries between one burial place and another. In the case of individual tumuli, each person had a separate, defined and bounded space for his or her grave, as well as the tumulus as a monument. For communal tumuli, such as the great mounds at the Magdalenenberg in south-western Germany (Spindler 1971–7), Magdalenska gora and Stična in Slovenia (Gabrovec 1974), and the sometimes enormous kurgans of eastern Europe (Reeder 1999), the edge of each mound formed a boundary between the community buried in that tumulus and the rest of the social world. In many cases, this boundary was emphasised by a substantial ditch or a stone wall.

We are still only beginning to understand the complexity of the physical boundaries that defined spaces in Early Iron Age cemeteries. Recent investigations at a number of sites have revealed systems of ditches that had been overlooked by earlier investigators. In part, the discovery and investigation of these alterations to the landscape have resulted from new concerns with sites in their regional contexts, or landscape archaeology. These landscape features were boundaries that played essential roles in funerary ceremonies. They are important reminders that the burials that have

constituted the foci of archaeological research in Early Iron Age Europe since the first half of the nineteenth century represent only one part of the funerary ritual. There has long been a tendency to view graves as static tableaux – final arrangements of material signs of the social persona of the deceased individual. We need instead to understand them as the physical manifestations of just one part of elaborate rituals. Two examples illustrate the point.

At Vix in eastern France, excavations in 1992, 200 m south-west of the famous richly outfitted woman's grave, uncovered a square ditched enclosure with sides about 23 m long (Chaume 1997). A 1.2 metre wide break in the ditch, presumably the entrance into the enclosure, is situated at the centre of the north-west side, facing the settlement on Mont Lassois. Two life-size limestone sculptures of seated persons were found on the north side of the entrance, one of a woman attired like the woman buried in the rich tomb, the other a man equipped with characteristic Early Iron Age weapons. Numerous skulls and mandibles of animals and large quantities of sherds from ceramic bowls recovered in the ditches have been interpreted as remains of rituals conducted inside the enclosure.

In a tumulus at the Glauberg north of Frankfurt in central Germany, in 1996 archaeologists uncovered two graves outfitted with swords and bronze vessels, one of them elaborately ornamented with figural art (Frey and Herrmann 1997). The style of the buried objects belongs to an early phase of the La Tène tradition and situates the find two or three generations after the Vix grave. In an earlier research approach, the full exploration of the tumulus would have concluded the investigation on the site. But the archaeologists expanded their excavations beyond the tumulus boundary and employed results of aerial photography to study the wider landscape around the monument.

The mound, 48 m in diameter, was surrounded by a massive ditch, 10 m wide and up to 3.7 m deep. In the ditch just a few feet from the mound was a nearly complete life-size statue of a man, sculpted of sandstone and shown outfitted with weapons. Nearby were fragmentary remains of three more life-size statues of men. The ditch that encircled the mound opened to the south-east to connect with two parallel ditches that defined an 'avenue' extending in a south-easterly direction. Then, 350 m from the mound, those

ditches turned, the western ditch sharply to the west, the eastern to the east.

These new results from Vix and from the Glauberg raise many important questions, especially about the role that the ditches played in defining boundaries. Further analysis of the results from these recent investigations, and study of other such boundary markers associated with funerary monuments, will surely yield new information about boundaries and ritual practice.

Decoration

Boundaries played a special role in the decoration that Early Iron Age craft workers applied to things they made. On many different kinds of everyday objects, including belt plates, neck jewellery, and pottery, makers divided available space into distinct zones bounded by linear patterns, and filled neighbouring zones with different kinds of ornament. Comparison of belt plates and pottery – two categories of objects that offer sizeable flat surfaces for ornamentation – from the Late Bronze Age and Early Iron Age illustrates this change (discussion in Wells 1998, 250–1).

Late Bronze Age belt plates generally bear minimal ornament, often repeated elements, usually without any kind of linear divisions in the decorative space. In the Early Iron Age, the space was frequently covered with ornament and is usually divided into many zones, with neighbouring zones often filled with contrasting patterns of elements (Déchelette 1913, 857 fig. 356). The same decorative principle is apparent in much of the pottery (*ibid.*, 824 fig. 336), as well as on categories of objects that occur only in the richest burials, such as sheaths of ornate daggers and gold neck-rings.

Figural representations

A fundamental innovation in parts of temperate Europe during the first millennium BC was the creation of a tradition of figural representation, including complex scenes showing humans engaged in purposeful actions (Reichenberger 1995). During the Bronze Age, figural representation of humans was rare in central parts of temperate Europe (although in Scandinavia and in the Alps scenes in rock-carving are common). But in the Early Iron Age – especially

from around 600 BC – representations of humans and of animals became important in central regions of the Continent. These included single figures, ranging from life-size statuary, such as the stone sculptures from the Vix enclosure and from the Glauberg; small cast bronze figures often recovered in graves; and scenes showing humans, animals and objects, incised on pottery and executed in relief on sheet bronze. My focus is on this new practice of representing scenes, a few examples of which I cite here.

A ceramic vessel from the cemetery at Sopron-Burgstall in Hungary shows a woman spinning and another weaving textile (Hoernes 1891, 76, fig. 16 and pl. 10, 2). A third woman appears to play a lyre, while two more women, with hands raised, frame the scene (the interpretations are discussed in Teržan 1996 and Eibner 2001). Another vessel from the same site shows a hunter on horseback, two groups of wild animals, two figures with a wagon, a pair of lyre players, and two women with their hands raised (Eibner 2001, 125, fig. 12b). A vessel from Sopron-Várishegy shows what has been interpreted as a scene of two women sacrificing a bird. Accompanying them is a rider on horseback, followed by another horse, and three women with raised arms (Teržan 1996, 526, fig. 15). Horseback riders and riders on wagons are also represented on vessels from Rabensburg in Austria and Nové Košariská in Slovakia (Dobiat 1982, 286, fig. 4; 287, fig. 5). In the tumulus cemetery at Schirndorf in northern Bavaria, a number of ceramic vessels bear representations of musicians playing lyres (Reichenberger 1985). One vessel shows a procession of three lyre players together with two stags.

On the back of the extraordinary bronze couch in the rich burial at Hochdorf are three repoussé scenes showing pairs of individuals with swords facing each other, interpreted as fighting or dancing (Biel 1985). They are flanked by a pair of wagons, each drawn by a pair of horses, with a human brandishing a shield and a staff, standing in the centre of each wagon. The whole complex is enclosed by a frame, the corners of which terminate in heads of water birds, potent symbols throughout the Late Bronze and Early Iron Ages.

Different because it is three-dimensional, the Strettweg wagon presents a scene with a dominant female holding a vessel on her

head with her upraised hands (Egg 1996). Much smaller males are arranged beneath her, some armed and riding horses, others holding the antlers of two stags. Near the centre of the scene are two pairs of men and women. Similar motifs are apparent on a large ceramic vessel from a tumulus grave at Gemeinlebarn in Lower Austria (Déchelette 1913, 599, fig. 233). Ceramic figures of women with vessels on their heads, horseback-riding warriors, and stags stand on the shoulder of the vessel. Around the top are small bronze figures of water birds.

The most detailed and visually precise scenes are those of the situla art, examples of which are most common in north-eastern Italy and Slovenia, but also occur north of the Alps at Matrei and Kuffarn in Austria (Lucke and Frey 1962). The situla scenes show a variety of activities including banquet preparations, feasts, athletic contests, music, sex, combat, military marching, hunting, and agriculture (for recent overviews of situla art see bibliography in Eibner 2001).

The majority of these scenes incised on pottery, hammered into sheet bronze, and cast in three-dimensional figures date to the latter part of the Early Iron Age. They are most common in circum-Alpine regions of Europe, though examples occur elsewhere as well. Most are clearly associated with signs of status and wealth, situated in rich burials distinguished by large above-ground monuments. The creation of these scenes, and of the tradition of which they were part, formed a significant representational boundary between communities for which this new medium became an important part of visual culture, and those in which it did not.

Why more boundaries now?

The boundaries around settlements, barriers enclosing tumuli, decoration structured by divisions, and the new figural art were interrelated phenomena that need to be understood in the context of changes that were taking place during the Early Iron Age. These developments were neither sudden nor universal, but parts of processes that can already be recognised in the Late Bronze Age and that happened in different ways in different landscapes. In the brief compass of this paper, I highlight two of these changes – increase in mobility and resulting interaction, and growing status

differentiation.

The clearest direct evidence for increasing mobility in Early Iron Age Europe is in the progressively larger quantities of materials that circulated, including amber ornaments, glass beads, jet and lignite jewellery, graphite for ornamenting pottery, rare substances such as coral, gold, ivory, and silk, and raw materials such as salt (Wells 1995). In addition to goods found far from their places of origin, there is abundant evidence showing the transmission of styles, motifs, and other elements in manufactured objects.

Circulation of goods is not the point here, but it serves as an indicator of mobility as a whole. We cannot directly see traces of people moving about, but the movement of materials indicates a portion of that mobility. As mobility grew, individuals came into contact with more people from other communities, and in the process they became more conscious of the character of their own communities and the differences between theirs and others. To establish physical control over movements of outsiders into their communities, people increasingly constructed boundaries consisting of ditches and palisades around their settlements. These structures created psychological boundaries between one community and the rest of the world. We cannot understand these functions separately, because they were parts of the same process.

In the earlier stages of the Early Iron Age, as at Geiselhöring, whatever group made decisions for the small communities – senior members of the group? council of elders? – directed the creation of these boundaries. Later, emerging elites at Early Iron Age centres such as Mont Lassois and the Heuneburg directed the process. As the clay-brick wall with its flamboyant bastions indicates, some used these boundaries as stark assertions of their power.

Differences in wealth and status between individuals were much more markedly expressed in the Early Iron Age than during either preceding or succeeding periods (Arnold 1995). The creation of new positions of power, represented in the elaborate and richly outfitted burials at Hochdorf, Vix, and tens of other well-studied sites, can be understood in relation to economic intensification and accompanying competition for power among rising elite groups and individuals. Efficiency of agricultural production increased at this time, greater resources were devoted to manufacturing, and

growing systems of exchange accompanied the rise of centres of production and commerce. Competition for control of the growing wealth and associated economic and political power led to the emergence of elites at regional centres whose status and identity they and their kin expressed in the richly outfitted burials, with their elaborate chambers and tumuli (e.g. Biel 1985), especially in the period 600– 450 BC (Dietler 1995).

Boundaries and the practice of everyday life

Whether a community constructs a perimeter ditch and a palisade primarily as a physical defensive impediment or to mark a social boundary between itself and the outside world (and the two probably most often go hand-in-hand), the people in that community and those outside it respond to that boundary as part of the built environment. Boundaries contribute to feelings of identification among people within, and of exclusion among those outside. Similarly, the boundary around a tumulus burial monument signals inclusion for members of the kin or other group that buries its dead in that mound, and exclusion for others. The acts of creating and using boundaries give them meaning – they become agents in the formation and transformation of identity.

The new decorative boundaries on belt plates, pottery, and other objects had similar effects. Art historian Erwin Panofsky (1951) observed that the style and content of art and decoration are part of a mindset or world view. They play active roles in shaping people's attitudes and values. Following Panofsky's line of argument, the new emphasis on bounded patterns of decoration on objects in everyday use accustomed people to think in terms of boundaries and differences more than they had done. This intriguing topic leads far beyond the scope of this paper and merits more exploration on its own.

To what extent were people conscious of the effects that physical boundaries had on their thinking? Surely the changes we recognise during the Late Bronze and Early Iron Ages happened gradually, and most people did not think about or notice them. But there may also have been an element of agency. Some individuals probably understood the psychological effects of an environment delineated by more physical boundaries, and some used this knowledge to

their advantage.

Figural representation and ritual practice

Since the first publications in the late nineteenth century of scenes represented on sheet bronze and pottery from Early Iron Age contexts, investigators have debated the meaning of those representations. One approach has argued that situla art displays the festive lifestyle of the elites of Early Iron Age north-eastern Italy, Slovenia, and Austria (Eibner 1981). The feasting and athletic practices show similarities to scenes from Mediterranean societies, but the specific material culture depicted – situlae and other vessels, helmets, spears, and axes – attests to local origins of the situla art products.

In recent years, the dominant view has held that the situla scenes and those in the other media are not portrayals of real life, but representations of myths and rituals (discussion in Kossack 1992; Teržan 1996; 2001; Koch 2002). The scenes on situlae, belt plates, pottery, and the Hochdorf couch show activities and objects that we know, from later literary sources, had important ritual and mythical associations (Davidson 1988). The activities shown include feasting and preparations for feasts, hunting, ploughing the ground, sex, music, horseback riding, riding wheeled vehicles, spinning, weaving, animal sacrifice, and one-on-one competition with swords and other implements. Objects represented include vessels, swords, wagons, plants, and animals, especially horses, bulls, stags, and birds of prey. While the particular meanings behind specific scenes surely differed, common themes in these representations include fertility, rebirth, fate, and communion with otherworldly powers (Davidson 1988; Kossack 1992; Teržan 1996).

The objects bearing the scenic representations occur in associations with individuals who are marked as members of elite groups. The Hochdorf grave is the best documented of these contexts, showing an individual accompanied by all of the principal accoutrements of wealth, status, and power in Early Iron Age Europe. Although not excavated under modern controlled conditions, the grave that contained the Strettweg wagon was also a characteristic richly outfitted burial (Egg 1996). The graves from which the figurally decorated situlae, belt plates, and pottery vessels

were recovered were also distinguished by their burial wealth or monumental tumuli. Furthermore, the objects that are most significantly represented in the scenes – bronze vessels, swords, and horse and wagon paraphernalia – are items commonly placed in the wealthiest burials. Thus a strong association is evident between the scenes represented and the regional elites of the Early Iron Age.

Pictorial representation can be understood as material expression of ideas (Geertz 1983; Kossack 1992). When myths and practices are transmitted orally, their structure and content tend to remain fluid and variable. When they are transmitted through text or picture, they lose much of that variability (Goody 2000). Representing a story or a practice visually fixes a particular version of the myth or ritual in the minds of those viewing it and receiving its message. The representation of religious beliefs and ritual practices in figural scenes has the effect of standardising them – creating ‘official’ versions of beliefs and practices that had been open to more diverse practice and interpretation. The association of these representations with elite burials indicates that the elite groups were in control of the creation of these pictures. They most likely created them for specific purposes.

Ritual and political change

During the Early Iron Age, new centres of wealth, commerce, and political power, unlike any that had existed earlier, emerged in parts of temperate Europe, at sites such as Mont Lassois, the Heuneburg, and the Hohenasperg in west-central Europe, Magdalenska gora, Stična, and Vače in the south-east Alpine region, and Sopron at the eastern end of the Alps. The elites who competed for power, both within their communities and regionally, used special objects (that we recover as burial goods) in their funerary ceremonies, along with monumental structures in the form of burial chambers and tumuli, to represent the status and authority they claimed. The objects they employed combined elements from old traditions, such as four-wheeled wagons, swords, gold ring jewellery, and bronze vessels, together with new materials, including luxury imports now available from the Mediterranean world, to emphasise their connections to admired foreign polities.

The adoption of the practice of displaying figural representation

such as the scenes discussed above was an innovation by these elites. The purpose may have been to legitimate the processes of increasing authority and political power that the elites were manipulating. As Teržan (2001) argues, many of the scenes display ceremonial practices linked to the assuming of power by elite individuals. The appearance of this new practice of figural representation in separate regions of Early Iron Age Europe attests to connections between rising elites at different centres (Dietler 1995), all employing symbols that mixed older, traditional elements with new ones. As the examples cited above suggest, all of the figural scenes are different, although they contain many elements in common, just as all of the rich burials at the centres are unique, though they share specific categories of grave goods and burial monuments.

Reception and response

All of the scenic representations are situated on objects that were intended for display in two principal contexts, both of which were significant arenas for social and political contestation – feasts and funerals. In fact, some of the situla art scenes are self-referential in this regard. The situla from Kuffarn in Austria, for example, shows a feast that includes a figure serving beverage from a situla, and a stand that holds six situlae awaiting use (Karner 1891, pl. 9). All of the figural scenes discussed in this paper are on objects recovered from burials. Presumably they played roles in the funerary ceremony that preceded the final arrangement of the objects in the graves.

The intended audiences for these figural scenes were the groups that participated in the feasts and in the funerary ceremonies. We do not have sufficient evidence yet to suggest whether the audience was a small group restricted to individuals of special status, such as the participants in the Greek *symposium*, or a larger body of the populace at the major centres. Given the much smaller size of Early Iron Age polities, even at the centres, I would expect a broader participation in these ceremonies than in the Greek event. I suggest that many people saw the figural representations, as beverages were dispensed at feasts and as objects were displayed before being assembled in a grave. Since we cannot assume that the details in

each scene were familiar to everyone present, we must imagine someone describing to the uninitiated the meaning of the scenes they were seeing, and using these opportunities to tell the stories the way that they wished them to be told. This process enabled the sponsor of the representation to, in effect, create the version of an important societal myth that he or she wished to make 'official' and thereby to assume control over this new medium.

In attempts to understand the Early Iron Age scenes, modern scholarship compares them to Greek and Etruscan representations (e.g. Torbrügge 1969). Of course, we are also tempted to compare them to later European paintings, modern cartoons, and other media with which we are familiar. But to understand the role that they played in their original settings, we must remember that their viewers did not have the same repertoire of familiar images with which to compare them. How did these Early Iron Age representational scenes relate to the conventions with which their viewers were familiar?

To most viewers, these scenes were probably quite mysterious. Some aspects of the scenes of feasting, and the significance of particular animals such as bulls and stags, probably had immediate meaning to the average person of the time. But the combinations of persons, animals and objects in complex scenes most likely required explanation by individuals who belonged to the groups that created the images. The explainers thus had considerable influence over the content of the messages.

Interpreting early Iron Age boundaries

Archaeologists in the twenty-first century can never experience enclosed settlements in the way that the people of the Early Iron Age did: our reaction to ornamented belt plates will always be different from theirs, and we will never know exactly how people responded to images such as those on the back of the Hochdorf couch or on the situla from Kuffarn. The archaeologists who excavate enclosed settlements and burial mounds see the material remains of the once-functioning boundaries, but not all of the accompanying details of the setting in which they were created and in which they served their purposes. For the rest of us, these boundaries exist only as patterns on paper in archaeological

publications, or images on slide screens, or as objects in museum cases or drawers. For the people we are studying, these were all parts of lived experience. Each person responded to the physical and decorative boundaries and the scenic representations in ways that depended upon their own experience and knowledge. As we try to understand these phenomena, we need to be constantly aware of the conceptual distance between their world and ours.

Transformation to a new style

The scenes represented on display objects of bronze and pottery were part of the larger trend during the Early Iron Age toward creating more boundaries, establishing more distinctions, and defining more complex identities. During the fifth century BC, the creation of these scenes declined, as did the practice of tumulus burial and the decorating of metal and ceramic objects with patterns that emphasised boundaries and distinctions. The new style of ornament that emerged is known as Early La Tène.

According to present understanding, the new style was created during the fifth century BC in the region of Europe that includes eastern France, the middle Rhineland, and southern Germany, thus overlapping in both time and space with much of the material discussed above. Like the Early Iron Age figural representations, many objects ornamented in the developing tradition indicate relationships between humans, animals, and plant life (Frey 1998), although both the style and the content of these new representations are different from those in the Early Iron Age media. But the fundamental themes which the combinations of humans, animals and plant motifs on objects such as the Glauberg neck-ring, the Erstfeld neck-rings, the Rodenbach bracelet, and the Reinheim ring jewellery convey (see Megaw and Megaw 1989 and Frey 1998 for illustrations) may be the same as those represented in the figural representations on the Sopron pottery, the Hochdorf couch, and in the situla art. These are fecundity, rebirth, and communion with supernatural powers.

When more highly stylised versions of these Early La Tène motifs were created in Britain in the fourth and third centuries BC (Jope 2000), many of those same basic messages are likely to have been embedded in the designs of insular Early Celtic art. Devising means

to interpret those patterns is a worthy challenge for future research (see Megaw and Megaw 2001).

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Bibliography

- Arnold, B. 1995. The material culture of social structure: rank and status in early Iron Age Europe, in Arnold and Gibson 1995, 43–52.
- Arnold, B. and Gibson, D.B. (eds) 1995. *Celtic Chieftdom, Celtic State*. Cambridge: Cambridge University Press.
- Bevan, B. 1997. Bounding the landscape: place and identity during the Yorkshire Wolds Iron Age, in A. Gwilt and C. Haselgrove (eds), *Reconstructing Iron Age Societies*, 181–191. Oxford: Oxbow Monograph 71.
- Biel, J. 1985. *Der Keltenfürst von Hochdorf*. Stuttgart: Theiss.
- Bowden, M. and McOmish, D. 1987. The required barrier, *Scottish Archaeological Review* 4, 76–84.
- Chaume, B. 1997. Vix, Le Mont Lassois, in P. Brun and B. Chaume (eds), *Vix et les éphémères principautés celtiques*, 185–200. Paris: Éditions Errance.
- Cunliffe, B. 1991. *Iron Age Communities in Britain* (3rd edn). London: Routledge.
- Davidson, H.R.E. 1988. *Myths and Symbols in Pagan Europe*. Syracuse: Syracuse University Press.
- Déchelette, J. 1913. *Manuel d'archéologie préhistorique celtique et gallo-romaine, II, 2. Premier âge du fer ou époque de Hallstatt*. Paris: Picard.
- Dietler, M. 1995. Early 'Celtic' socio-political relations, in Arnold and Gibson 1995, 64–71.
- Dobiat, C. 1982. Menschendarstellungen auf ostalpiner Hallstattkeramik, *Acta Archaeologica Hungaricae* 34, 279–322.
- Egg, M. 1996. *Das hallstattzeitliche Fürstengrab von Strettweg bei Judenburg in der Obersteiermark*. Mainz: Römisch-Germanisches Zentral-museum.
- Eibner, A. 1981. Darstellungsinhalte in der Kunst der Hallstattkultur, in C.

- Eibner and A. Eibner (eds), *Die Hallstattkultur*, 261–296. Linz: Land Oberösterreich.
- Eibner, A. 2001. Die Stellung der Frau in der Hallstattkultur anhand der bildlichen Zeugnisse, *Mitteilungen der Anthropologischen Gesellschaft in Wien* 130–131; 107–136.
- Frey, O.-H. 1998. The stone knight, the sphinx and the hare: new aspects of early figural Celtic art, *Proceedings of the Prehistoric Society* 64, 1–14.
- Frey, O.-H. and Herrmann, F.-R. 1997. Ein frühkeltischer Fürstengrabhügel am Glauberg im Wetteraukreis, Hessen, *Germania* 75, 459–550.
- Gabrovec, S. 1974. Die Ausgrabungen in Stična und ihre Bedeutung für die südostalpine Hallstattkultur, in B. Chropovský (ed.), *Symposium zu Problemen der jüngeren Hallstattzeit in Mitteleuropa*, 163–187. Bratislava: Verlag der slowakischen Akademie der Wissenschaften.
- Geertz, C. 1983. Art as a cultural system, in C. Geertz, *Local Knowledge*, 94–120. New York: Basic Books.
- Goody, J. 2000. *The Power of the Written Tradition*. Washington: Smithsonian Institution.
- Harding, A. 2000. *European Societies in the Bronze Age*. Cambridge: Cambridge University Press.
- Haselgrove, C., Armit, I., Champion, T., Creighton, J., Gwilt, A., Hill, J.D., Hunter, F. and Woodard, A. (eds) 2001. *Understanding the British Iron Age: an Agenda for Action*. Salisbury: Wessex Archaeology.
- Hill, J.D. 1995. How should we understand Iron Age societies and hillforts? A contextual study from southern Britain, in J.D. Hill and C.G. Cumberpatch (eds), *Different Iron Ages: Studies on the Iron Age of Temperate Europe*, 45–66. Oxford: British Archaeological Reports International Series 602.
- Hingley, R. 1990. Boundaries surrounding Iron Age and Romano-British settlements, *Scottish Archaeological Review* 7, 96–103.
- Hoernes, R. 1891. Ausgrabungen bei Oedenburg, *Mitteilungen der Anthropologischen Gesellschaft in Wien* 21, 71–78.
- Jope, E.M. 2000. *Early Celtic Art in the British Isles*. Oxford: Clarendon Press.
- Karner, P.L. 1891. Ueber einen Bronzesitula-Fund bei Kuffarn in Niederösterreich, *Mitteilungen der Anthropologischen Gesellschaft in Wien* 21, 68–71.
- Kimmig, W. 1983. *Die Heuneburg an der oberen Donau*. Stuttgart: Theiss.
- Koch, L.C. 2002. Notizen zu zwei Bildern der Situlenkunst, *Archäologisches Korrespondenzblatt* 32, 67–79.
- Kossack, G. 1992. Lebensbilder, mythische Bilderzählung und Kultfestbilder, in *Festschrift zum 50jährigen Bestehen des Institutes für Ur- und Frühgeschichte der Leopold-Franzens-Universität Innsbruck*, 231–246.

Bonn: Habelt.

- Leidorf, C. 1985. Südbayerische 'Herrenhöfe' der Hallstattzeit, in M. Petzet (ed.), *Archäologische Denkmalpflege in Niederbayern*, 129–142. Munich: Bayerisches Landesamt für Denkmalpflege.
- Lucke, W. and Frey, O.-H. 1962. *Die Situla in Providence (Rhode Island)*. Berlin: Walter de Gruyter.
- Megaw, J.V.S. and Megaw, M.R. 2001. A cat-and-mouse game: tracing Iron Age elements in the Book of Kells, in E. Pohl, U. Recker and C. Theune (eds), *Archäologisches Zellwerk*, 209–253. Rahden: Verlag Marie Leidorf.
- Megaw, R. and Megaw, V. 1989. *Celtic Art*. London: Thames and Hudson.
- Nagler-Zanier, C. 1999. *Die hallstattzeitliche Siedlung mit Grabeneinlage von Geiselhöring, Niederbayern*. Büchenbach: Dr Faustus.
- Panofsky, E. 1951. *Gothic Architecture and Scholasticism*. Latrobe: Archabbey Press.
- Pauli, L. 1978. *Der Dürrenberg bei Hallein III*. Munich: C.H. Beck.
- Parker Pearson, M. 1996. Food, fertility and front doors in the first millennium BC, in T.C. Champion and J.R. Collis (eds), *The Iron Age in Britain and Ireland: Recent Trends*, 117–132. Sheffield: J.R. Collis Publications.
- Reeder, E. (ed.) 1999. *Scythian Gold*. New York: Harry N. Abrams.
- Reichenberger, A. 1985. Der Leierspieler im Bild der Hallstattzeit, *Archäologisches Korrespondenzblatt* 15, 325–333.
- Reichenberger, A. 1995. Figürliche Kunst: Hallstattzeit, *Reallexikon der germanischen Altertumskunde* 9, 13–20.
- Rieckhoff, S. and Biel, J. 2001. *Die Kelten in Deutschland*. Stuttgart: Theiss.
- Sørensen, M.L.S. 1997. Reading dress: the construction of social categories and identities in Bronze Age Europe, *Journal of European Archaeology* 5, 93–114.
- Spindler, K. 1971–7. *Magdalenenberg*, Vols 1–5. Villingen: Neckar-Verlag.
- Teržan, B. 1996. Weben und Zeitmessen im südostalpinen und westpannonischen Gebiet, in E. Jerem and A. Lippert (eds), *Die Osthallstattkultur (Symposium Sopron 1994)*, 507–536. Budapest: Archaeolingua 7.
- Teržan, B. 2001. Richterin und Kriegsgöttin in der Hallstattzeit, *Prähistorische Zeitschrift* 76, 74–86.
- Thomas, R. 1997. Land, kinship relations and the rise of enclosed settlement in first millennium BC Britain, *Oxford Journal of Archaeology* 16, 211–218.
- Torbrügge, W. 1969. Figürliche Zeichnungen der Hallstattzeit aus Nordostbayern und ihre Beziehungen zur antiken Welt, in D. Albrecht, A. Kraus and K. Reindel (eds), *Festschrift für Max Spindler*, 1–24. Munich:

C.H. Beck.

Wells, P.S. 1983. *Rural Economy in the Early Iron Age: Excavations at Hascherkeller, 1978–1981*. Cambridge, MA: Peabody Museum.

Wells, P.S. 1995. Trade and exchange, in M.J. Green (ed.), *The Celtic World*, 230–243. London: Routledge.

Wells, P.S. 1998. Identity and material culture in the later prehistory of central Europe, *Journal of Archaeological Research* 6, 239–298.

Wells, P.S. 2001. *Beyond Celts, Germans and Scythians: Archaeology and Identity in Iron Age Europe*. London: Duckworth.

Rethinking Earlier Iron Age settlement in the eastern Paris Basin

Colin Haselgrove

Introduction

Ever since the nineteenth century, the Iron Age cemeteries of Champagne have provided one of the main building blocks of Early La Tène archaeology (e.g. Déchelette 1927; Bretz-Mahler 1971; Stead and Rigby 1999) and they remain central to many current analyses of social and political change during the period (e.g. Demoule 1997; 1999; Diepeveen-Jansen 2001; this volume; Baray 2004). In contrast, the settlements of the Aisne–Marne culture – as it is often called – are relatively unknown outside their region and have so far played a secondary role to the mortuary evidence in our interpretation, although both sets of data need to be integrated if we are ultimately to obtain a rounded view of the relevant communities. Moreover, the settlement record has the ability to set the sharp increase in visible burials in Champagne in the mid first millennium BC in a broader social and demographic perspective, leaving us better placed to assess the real significance of the phenomenon. So far, however, and due largely to the amorphous character of much of the data available until very recently, which is nearly all from open sites, the settlement evidence has effectively eluded definition.

As a first step, this paper will assess the nature of Earlier Iron Age settlement across a broad swathe of northern France, using the mass of new data generated by development-led excavation since the 1980s. In geological terms, my core study area encompasses the eastern Paris Basin, extending from the French capital as far as the River Moselle, a distance of nearly 300 km (Fig. 1).¹ This can be

divided into three main zones. In the west are the limestone plateaux of southern Picardy and the Ile-de-France, through which the Seine and its major tributaries – the Aisne, the Marne and the Oise – have cut down to form broad alluvial valleys, whose sheltered gravel terraces present a marked contrast with the exposed plateau tops. In the centre is the ‘Dry Champagne’, a monotonous expanse of arid chalk plain, where modern settlement is clustered around the principal rivers. It was in this region that the Aisne– Marne culture was focused.² East of the River Aisne, the chalk gives way to the alternating claylands and limestone escarpments of western Lorraine, bisected by the northward flowing Meuse and Moselle. On its northeastern side, the study area is bounded by the Ardennes plateau, running eastward into Belgium and Luxembourg, whilst the country to the north-west of the Oise and closer to the Channel coast, from where I shall draw some additional material, is mostly chalk upland.

Over the last two decades, the principal river valleys east of Paris have been subject to intensive gravel extraction, resulting in the excavation of numerous open settlements of Earlier Iron Age date. The vast majority of these sites were hitherto unknown and would have remained so but for extensive topsoil stripping.³ Thanks to the major rescue programme launched in 1974 by Paris 1 University, the quality of data is especially high in the Aisne and Vesle valleys, where the limestone plateaux of the central Paris Basin and the Champagne chalkland meet ([Fig. 2](#)), and this region will figure prominently in my discussion. Other notable concentrations of Earlier Iron Age sites exist in the Oise valley – where organised rescue work again started early, including Blanchet’s (1984) pioneering excavations at Choisy-au-Bac (Oise) at the Aisne–Oise confluence – and in the Seine valley south-east of Paris (see [Fig. 1](#)). In Lorraine, the Moselle valley south of Metz has also seen extensive mineral extraction.



Fig. 1. Northern France, showing the principal Late Bronze Age and Earlier Iron Age sites mentioned in the text.

On its own, the evidence from this one environment, however prolific, can only take us so far in understanding the overall pattern of Earlier Iron Age settlement. Indeed, there is little doubt that in certain areas settlement actively avoided the alluvial terraces at specific periods in the first millennium BC, as we will see below. Since 1989, however, rescue operations ahead of other forms of development have impacted extensively on archaeological knowledge of the study area, notably the building of the new motorway network and the TGV Nord and Est;⁴ the construction of new commercial and industrial parks (ZACs), themselves often closely linked to new roads; and, especially in the Greater Paris area, new housing and new towns (Marion 2004).⁵ Unlike gravel extraction, these other kinds of development have affected all parts of the landscape, and across the eastern Paris Basin as a whole have gone much of the way to redressing the bias to the major river valleys, although at micro-regional level this is still more of a problem, as in the Aisne valley.⁶

One result of this other work has been to show that, whilst intensive occupation of the plateaux does not occur before the Later Iron Age (Haselgrove 2007), there was a certain amount of earlier settlement on the chalk uplands north of Paris, with 1–3 sites being

reported every 5 km on the A16 and A29 motorways in Somme (Brun *et al.* 2005, 100). The overall picture, however, seems to be quite variable: the Toyota development at Onnaing (Nord), for instance, revealed 18 sites of Earlier Iron Age date over an area equivalent to a 40 km stretch of motorway (Bretagne 1998), whilst ten were found on the site of Metz-Nancy airport (Blouet 1999).⁷ At Arras-Actiparc, on the other hand, where an area of some 3 km² of fertile chalk dome beside the River Scarpe were explored, the only Iron Age occupation found prior to the third century BC was a small ploughed-out site of Hallstatt date (Prilaux 2002).

What is certain is that thanks to the archaeology undertaken in advance of the different forms of development, the eastern Paris Basin now has more extensively excavated Earlier Iron Age settlements than virtually any other part of Europe.⁸ This material is not without difficulties, however. Firstly, only a few of the sites excavated in the last 30 years have been comprehensively published, notably Bussy-Saint-Georges (Seine-et-Marne; Buchez *et al.* 2001; 2002); Gondreville/Fontenoy-sur-Moselle (Meurthe-et-Moselle; Deffressigne *et al.* 2002); and Villeneuve-Saint-Germain, Les Étomelles (Aisne; Auxiette *et al.* 2003), and the latter, at least, is only part of a larger complex (Hénon 2001). The last general surveys covering all or part of my study area were undertaken when the rescue boom was in its infancy (Freidin 1982; Blanchet 1984) and are restricted to the period before 500 BC, whilst more recent studies of the settlement evidence have tended to encompass smaller areas and deal primarily with the Late Hallstatt and La Tène periods (e.g. Gransar *et al.* 1999; Villes 1999; Marion 2004). For many sites, the only readily available information is in the form of short summaries and interim reports.

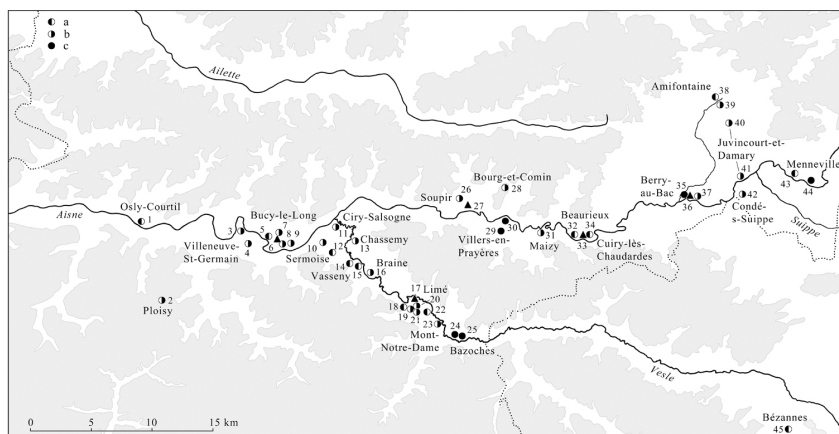


Fig. 2. Map of the middle Aisne valley, showing excavated sites occupied in: (a) Bronze Finale IIIb–Hallstatt C (EIA1); (b) Hallstatt D1–La Tène B (EIA2); (c) both periods; triangle = battery of silos. Site names: 1. La Terre Saint-Mard; 2. Le Bras de Fer; 3. Les Grèves; 4. Les Étomelles; 5. La Héronnière; 6. Les Longues Raies; 7. La Grande Pièce de la Croix Rouge; 8. Le Fond du Petit Marais/Le Chemin de Venizel; 9. Le Grand Marais; 10. Les Prés du Bout de la Ville; 11. La Bouche à Vesle; 12. Le Bruy; 13. La Saule Baillot; 14. La Hache de la Couture; 15. Dessus du Marais/Dessus des Groins; 16. La Grange des Moines; 17. Les Sables (N); 18. Les Fussis; 19. La Prairie; 20. Les Sables (S); 21. La Fosse aux Chevaux; 22. Le Gros Buisson; 23. Vaudigny; 24. La Foulerie; 25. Les Chantraines; 26. Le Parc; 27. Le Champ Grand Jacques; 28. Le Montagne de Comin; 29. Les Mauchamps; 30. Le Bois Barry; 31. Les Grands Aisements; 32. Les Grèves; 33. Les Fontinettes; 34. Le Champ Tortu; 35–6. Le Vieux Tordoir; 37. Le Chemin de la Pêcherie; 38. Le Petit Ranicourt; 39. La Queue d'Alonde; 40. La Fosse au Vertillon; 41. Le Gué de Mauchamp; 42. Le De Profundis; 43. La Bourguignotte; 44. Derrière le Village; 45. Les Marsilliers (51).

A second problem concerns the close dating of individual sites. Whilst structural reports for every excavation are lodged in the regional archives, it is rare for study of the pottery and other datable finds to be taken beyond assessment. Given that many Earlier Iron Age settlements extend over large areas and/or consist of separate clusters, it is often difficult to be sure whether or not different elements are contemporary or successive. A related point is that whilst investigations on the alluvial terraces and in advance of building ZACs characteristically cover large surfaces, increasing the chances of detecting the full extent of a given complex, those ahead of motorways and the TGV are generally restricted to a narrow

corridor, increasing the chance of missing other elements of the same site.⁹

Cultural and chronological background

In the first part of the Late Bronze Age (Bronze Final I–IIa; c. 1350–1150 BC), the eastern Paris Basin straddled the boundary between the Atlantic and North Alpine cultural traditions, although settlement evidence associated with the former is still poorly documented in the region (Blanchet 1984; Brun 1986, Étape 1; Brun *et al.* 2005). The succeeding period (Bronze Final IIb–IIIa; c. 1150–930 BC) saw the North Alpine complex – in the guise of the ‘groupe Rhin-Suisse-France orientale’ (RSFO) – expand north-west across the River Oise to encompass the entire study area (Brun 1986, Étape 2; Brun and Mordant 1988). At least two settlements attributable to the RSFO are now known in the Somme valley, hitherto seen as falling entirely within the Atlantic sphere: the first at Feuillères on the TGV Nord, some 40 km beyond the River Oise (Talon 1992); the second at Vignacourt, Au Chemin du Haut Nord, on the A16 north-west of Amiens (Colin 2000), only 50 km from the Channel coast.

In the Aisne valley, the final phase of the Bronze Age as conventionally defined (Bronze Final IIIb, c. 930–800 BC) can be subdivided into two successive horizons (Brun *et al.* 2005, 102): an earlier one, in which the pottery is still richly decorated in the RSFO tradition, characterised by Osly-Courtil, La Terre de Saint-Mard (Le Guen 2005), and a later one, in which the use of decoration is more restrained, typified by Nanteuil-sur-Aisne, Les Ecouaires (Lambot 1978). Many ceramic assemblages in the study area cannot, however, be attributed more closely than to the general bracket Bronze Final IIIb to Hallstatt D1. In view of this and the sudden rise in iron objects in contexts attributed to Bronze Final IIIb (Brun 1986, 70), many French archaeologists now prefer to consider the latter period structurally as part of the Iron Age, treating it and Hallstatt C as a continuum (*ibid.*, 76; Milcent 2004), a practice I shall adopt here.¹⁰ As elsewhere, bronze hoarding in northern France reached its peak in Bronze Final IIIb, only to fall back sharply in Hallstatt C (O’Connor 1980; Blanchet 1984; cf. Milcent 2004; Fontijn and Fokkens this volume).¹¹

Diagnostic metalwork is notable only by its virtual absence on

most Iron Age settlements prior to the mid first millennium BC. In one or two areas, it has, however, proved possible to construct a more refined ceramic chronology for the period from the eighth to sixth centuries BC. The most widely used scheme is that developed by Blanchet (1984) and elaborated by Talon (1987; 1989), based largely on finds from the periodically flooded settlement at Choisy-au-Bac, where four successive occupation horizons were recognised, during which decorated pottery became increasingly rare. Period 1, to which Blanchet assigned a starting date between 780–760 BC, and which he recognised as pre-dating the classic Hallstatt C period (Blanchet 1984, 429), can nowadays be broadly equated with the Wehringen or Hallstatt C1a phase in central Europe, as defined by Pare (1999; see also O'Connor this volume). Choisy-au-Bac was abandoned early in Blanchet Period 3 (Hallstatt D1), which is better represented at nearby settlements such as Néry and Longueuil-Sainte-Marie, Les Taillis (Talon 1989). More recently, a periodisation covering the ninth to sixth centuries BC has been proposed for the area around the Seine–Yonne confluence, based on the seriation of pit assemblages from Cannes-Ecluse, Marolles-sur-Seine and La Grande Paroisse (Bulard and Peake 2005), but as in Oise, the scheme can only be applied to sites in the immediate region.

Notwithstanding a general lack of settlements currently attributable to Hallstatt D1, other changes at this period, such as the increased archaeological incidence of personal ornaments of all kinds including brooches (Milcent 2004), imply that this was when the social and ideological foundations were laid for the emergence of the Aisne–Marne culture in Champagne in the late sixth century BC, accompanied by a marked increase in settlement visibility throughout the study area. The chronology of the cemeteries has been thoroughly reassessed by Demoule (1999), who defined three main periods of use lasting until the late fourth century BC (Aisne–Marne I–III).¹² The final phase (Aisne–Marne IV) effectively marks the onset of the Later Iron Age in northern France: most cemeteries were abandoned, whilst settlements are once again in short supply; other innovations included the adoption of coinage and the appearance of formal religious sanctuaries (Haselgrove 2007).

Demoule's scheme can be extended to the accompanying settlement data, at least in broad terms (e.g. Hénon *et al.* 2002).

Equally, whilst the Aisne valley marks the northern limit of the main cultural complex, a certain amount of Aisne–Marne influence is apparent in adjacent areas, both in burials and in settlements (cf. Hurtrelle *et al.* 1990; Prilaux 2000), enabling some degree of correlation across a wider area.¹³ Not all archaeologists working in Champagne have adopted Demoule’s chronology, however, and some prefer to use the older terminology of Hatt and Roualet (1976), whilst separate systems have been evolved in the Oise valley and the Ilede-France (Malrain *et al.* 1996; Marion 2004). For ease of comparison, I shall therefore follow many French archaeologists and employ the Reinecke system as a basic framework, but resort to a simple twofold division into *EIA1* (Bronze Finale IIIb–Hallstatt C, c. 930–640 BC) and *EIA2* (Hallstatt D1–La Tène B1, c. 640–325 BC), where greater precision is unnecessary or presently unattainable.¹⁴

Table 1 sets out some of the different schemes and summarises the date ranges for the main phases. The absolute dating has been discussed at length elsewhere (see references above) and rests ultimately on correlations with Late Bronze Age and Iron Age sequences from Germany and Switzerland, with their growing number of tree-ring dates (e.g. Pare 1999; Harding 2000). So far, there has been relatively little application of radiocarbon to Earlier Iron Age sites in northern France (cf. Gasco 1996), partly no doubt because the area of major uncertainty between 800–500 BC coincides with the plateau on the calibration curve. There are signs, however, that attitudes are beginning to change and more dates are being sought, and are proving informative.¹⁵ It remains to be seen whether, as in Britain, the overall chronology for northern France has to be revised as more radiocarbon dates become available, or whether the impact is confined to individual sites.¹⁶ Opportunities for dendrochronology in the study area have so far been restricted to a handful of Earlier Iron Age sites (cf. Peake *et al.* 2005), including Bazoches-lès-Bray (Seine-et-Marne), Houdancourt (Oise) – both beside palaeo-channels – and the salt making site at Sorrus (Pas-de-Calais).¹⁷

Climate and environment

Environmental indicators point to a significant climatic

deterioration during *EIA1*, when the prevailing weather conditions became both colder and wetter (Magny 1995; Gransar 2002b). It is plausibly suggested that, along with increased run-off as a result of intensified woodland clearance in the vicinity, this deterioration was behind the periodic flooding evident at Choisy-au-Bac (Blanchet 1984, 412), as well as a factor in the major flood event which affected La Croix-Saint-Ouen, Le Pré des Isles, further down the Oise, during the same period (Gaudefroy 2000). The climate improved for the duration of the fifth century BC, before deteriorating afresh in the fourth and third centuries BC.

Woodland clearance events are apparent in numerous pollen sequences from the end of the second millennium BC onwards and the more accessible areas of the landscape were undoubtedly substantially cleared before the middle of the first millennium BC (e.g. Buchez *et al.* 2002). Arboreal species account for only about 30% of pollen in samples from a waterlogged well of Hallstatt D1 date at Villeneuve, Les Étomelles (Auxiette *et al.* 2003, 40–5). Significantly, work on the A34 motorway on the Oxford clays north of the Aisne implies that even in this area of relatively heavy soil, erosion linked to clearance began in the Hallstatt period, although it only became widespread in the Later Iron Age (Laurelut and Louwagie 2002). Much of the remaining woodland was heavily managed, as study of the waterlogged wood from Bazoches-lès-Bray proves (Peake *et al.* 2005). At this last site in the Seine valley, pollen evidence indicates clearance in Hallstatt C and again in Hallstatt D2–D3, with a break in between (*ibid.* 163–7).

<i>Approx Date</i>	<i>Reinecke</i>	<i>Hatt and Roualet 1976</i>	<i>Eastern Paris Basin</i>	<i>This paper</i>	<i>Britain</i>
1150–1050/1020 BC	Hallstatt A2	Bronze Finale IIb	Brun Étape 2	<i>LB-A2</i>	Wilburton
1050/1020–930 BC	Hallstatt B1	Bronze Finale IIIa			Ewart/Blackmoor
930–800 BC	Hallstatt B2–B3	Bronze Finale IIIb	Brun Étape 3	<i>ELA1</i>	Ewart/Carp's Tongue
800–640/630 BC	Hallstatt C	Hallstatt Ancien			Llyn Fawr
640/630–530 BC	Hallstatt D1	Hallstatt Moyen		<i>ELA2</i>	
530–475/450 BC	Hallstatt D2–D3	Hallstatt Final	Aisne-Marne I		
475/450–400 BC	La Tène A1–A2	La Tène Ancienne I-IIa	Aisne-Marne II		
400–325 BC	La Tène B1	La Tène Ancienne IIb	Aisne-Marne III		
325–270/250 BC	La Tène B2	La Tène Ancienne III	Aisne-Marne IV	<i>LLA</i>	

Table 1. Late Bronze Age and Earlier Iron Age chronology in northern France.

There is evidence from several other regions, particularly the Dry

Champagne, for erosion linked to agricultural intensification in the later first millennium BC, leading to earlier sites being covered by colluvial deposits. Soil studies along the TGV Est indicate that by the Later Iron Age the chalk was suffering significant erosion (Fechner *et al.* 2001). Sites sealed by colluvium have also been found in the limestone regions of the Paris Basin, as at Bucy-le-Long in the Aisne valley (Brun and Pommepuy 1983), a factor which in some areas could significantly inhibit the discovery of Earlier Iron Age sites.

Settlement numbers

In general terms, the second half of the Late Bronze Age (*LBA2*) saw a marked increase in settlement numbers and visibility throughout the eastern Paris Basin, a trend which carries on into the Earlier Iron Age (e.g. Pion 1990; Brun and Pion 1992). If the figures for Picardy are reasonably typical – which the research for this paper suggests they are – settlement numbers in *EIA1* appear to be approximately double the figure for *LBA2*, and to double again in *EIA2* (Brun *et al.* 2005), although the overall number of sites is still far short of the kind of densities typically found in the Later Iron Age.¹⁸

There is ample evidence, however, to suggest that the general trend masks significant fluctuations during the six centuries of the Earlier Iron Age. Throughout the eastern Paris Basin, settlement numbers appear to peak around the ninth century BC (Bronze Final IIIb) and again, more strongly, in the fifth century BC (Hallstatt D2–D3/La Tène A). The latter is admittedly the phase with the most diagnostic material, but even so, it is clear that we find fewer settlements dating to the seventh and earlier sixth centuries BC (Hallstatt C2–D1) or to the late fourth and third centuries BC (La Tène B2–C1) than we might expect, even in the most intensively researched areas like the Aisne valley. Another indication of the lack of continuity is apparent in site location. It is relatively rare to find sites that were inhabited in both *EIA1* and *EIA2*, let alone continuously, and in the cases where Iron Age settlements reoccupy locations that were frequented in *LBA2*, they tend to be of fifth century BC date, when numbers were at their highest.

As Gransar and others have noted, the centuries when settlement

is most visible in the eastern Paris Basin correspond to the periods in the first millennium BC when the climate was at its warmest and driest, whilst the two periods when settlements become much harder to find coincide with downturns in the climate (Gransar *et al* 1999; Gransar 2000). What is less clear is to what extent we are dealing with real falls in population density, or whether other factors apply, such as a relocation of settlement to areas where there has been less research and/or the concentration of people into fewer, larger sites. The evidence from linear projects certainly implies a reduction in site numbers in the sampled areas, but it is easy to see how wetter conditions, as well as impacting on agriculture, could have caused population to move away from the river terraces and into areas that have not received as much attention, thereby exaggerating the degree of change.

Such questions cannot, however, be answered without clearer understanding of the settlements themselves, to which I will now turn. This is hindered by the fact that the vast majority of known Earlier Iron Age sites lack obvious physical boundaries. I shall first examine the form and dynamics of open settlement, before turning to the far smaller number of enclosed sites, both hilltop and low-lying, with Earlier Iron Age activity. Finally, I shall examine developments at the end of the period and what these signify.

The anatomy of settlement

The bulk of the available evidence takes the form of small post-built structures, pits, and silos, together with other miscellaneous features like ovens and hearths; working hollows and extraction pits; and wells or water holes. Most of the post structures are of the familiar 4-and 6-post type, generally interpreted as above-ground storage structures, but they also include some larger 9-or even 12-post structures.¹⁹ A smaller number of other building types are known, most of them apparently the remains of ancillary structures such as workshops, byres, and even cellars.

Despite the surge in excavation, larger buildings that are obviously residential remain rare in the eastern Paris Basin. It has been this more general lack of houses, which has hampered both identification and understanding of Earlier Iron Age settlement. This deficiency has been discussed at length and has not been wholly

resolved by the increase in excavations. For a long time and despite the presence of so many small post structures, there was a tendency to explain this void as due to ploughing and deep stripping, or even to suggest that such buildings did not exist, but more recently opinion has begun to implicate the form of construction. Another problem is that on many sites the sheer number of post holes makes it difficult to distinguish individual structures, so that more than one interpretation may be possible. It would not be unfair to say that some rather imaginative reconstructions (which wouldn't necessarily have stood up, either to the elements or to scrutiny) have emerged over the years!

As [Figure 3](#) shows, however, an increasing number of clear building plans are now available, and evidence is also emerging for different kinds of construction techniques. At the stratified sites of Catenoy and Choisyau-Bac in Oise, Blanchet found clear evidence of wall footings of stone and daub belonging to small rectangular buildings (Blanchet 1984; Blanchet and Talon 1987). These were rebuilt several times on the same and in different positions, and on different alignments, in the lifetime of the settlements. Many of these structures seem to have been houses, but some may be workshops or for storage. Buildings of similar construction have since been found at Herblay (Val d'Oise; Marion 2004, 236–9), some of them the same size, others considerably larger. Between them, the three sites span the whole first half of the first millennium BC, indicating that locally at least, this form of construction was relatively long-lived.

Large buildings with trenches for sill-beams are known from two chalkland sites closer to the Channel coast – Beautot, L'Echangeur (Seine-Maritime; Dechezleprêtre *et al.* 2000, 323–4) and Pont-Rémy (Somme; Prilaux 2000). Both structures date to Early La Tène.²⁰ Also of this period is a small three-aisled building with a central hearth at Chassemy (Aisne); here the walls are represented by pairs of stake holes (Rowlett *et al.* 1969). This building owed its preservation to the fact that the fine loam on which it was built had been under woodland, and not ploughed. Otherwise, no trace would have survived. Since most of the excavated sites are on heavily ploughed land, buildings leaving similarly insubstantial traces may have been widespread.²¹

At present, the only known examples of larger buildings of earthfast timber construction dating to *LBA2* and the start of *EIA1* are from Lorraine. Most of these appear to be relatively small, one-aisled constructions, like those at Metz-Nancy airport (Blouet 1999), but more complex buildings sometimes occur, as at Frouard (Hamm 2004, 220–2) and Rosières-aux-Salines (Koenig 1999) in Meurthe-et-Moselle. The Frouard building may have an integral external yard (Fig. 3), while several of those at Rosières have three pairs of dualled posts at each end, and show signs of a bipartite division of space, whilst others have small attached annexes.

From the end of *EIA1*, the variety of construction techniques increases and larger rectangular post buildings start to occur throughout the study area, without ever becoming common. Among the earliest are Pont-de-Metz (Somme; Lemaire and Buchez 2001) and Rosnay-L'Hôpital, Les Grandes Pâtures (Aube; Koehler 1994; Villes 1999). Buildings of *EIA2* date include Bucy-le-Long, Le Grand Marais (Brun and Pommepuy 1988); Isles-sur-Suippe, Les Fontaines (Marne; Dugois 1992); Mairy, Les Hautes Chanvières (Ardennes; Villes 1999); and Barbey, La Haye Guyon and Grisy-sur-Seine, Les Terres du Bois Mortier in Seine-et-Marne (Gouge and Séguier 1994).²²

One-, two- and three-aisled forms are attested, as well as integral annexes or even small yards (Fig. 3). In some cases, the precise form of construction is unclear: for example, Compiègne, Fond Pernant (Oise), which has been reconstructed as both two- and three-aisled (Lambot 1988). Some structures may have had rounded corners (Barbey), or possibly apsidal ends,²³ and trapezoidal plans are also known, as at La Chaussée-sur-Marne and Saint-Gibrien, Dessus du Vieux-Pont in Marne (Villes 1981; 1991). Sometimes the walls are represented by substantial posts; other buildings presumably had walls of sill-beam or other construction outside the roof-bearing aisle posts (Mairy, Pont de Metz, Saint-Gibrien). In this regard, seemingly smaller constructions – like the 12-post structure at Lieusaint (Seine-et-Marne; Boulenger 2005), or a type of 8-post building recently recognised at two sites on the line of the TGV Est²⁴ – should not be overlooked as potential houses, since, if we allow for external walls which have not survived, their original ground plan could have been significantly larger.

There is no clear evidence from the eastern Paris Basin for buildings divided into separate areas for people and animals, along the lines of the byre house tradition familiar in the Low Countries and beyond from the Middle Bronze Age onwards (Fontijn and Fokkens this volume; Gerritsen this volume). At present, the best candidates in the study area are the bipartite houses at Rosières-aux-Salines (above), but for definite byre houses, one has to cross the frontier into western Belgium and Luxembourg, where a scatter of examples apparently of Late Hallstatt date are known, as for example at Sint-Gilles-Waas in Flanders (Bourgeois *et al.* 2003) and at the Aleburg at Beaufort (Befort) in the Ardennes (Schindler 1969).²⁵

Nor at present is there any sign of large circular structures of Earlier Iron Age date comparable to those known in Normandy (Jahier *et al.* 2000).²⁶ There is, however, a scatter of Earlier Iron Age circular buildings on the north-western fringes of the study area, including examples of ring-groove construction at Bouafles (Eure; Dechezleprêtre *et al.* 2000, 326–7) and Sint-Martens-Latem, in Belgium (Bourgeois *et al.* 2003), and one of Early La Tène date at Monchy-le-Preux (Pas-de-Calais; Jacques and Rossignol 1996). This latter site yielded a bone carding comb similar to British examples (*ibid.*, fig. 6).

Ancillary structures and activities

Most features found on Earlier Iron Age settlements seem to be linked to agriculture and other everyday activities. As might be expected, the occurrence of underground silos for grain storage is generally restricted to drier terrain, although they do occur in locations subject to periodic flooding or changes in the water table (Gransar 2000; 2002b). On some sites exposed to wetter conditions, a particularly shallow type of silo was constructed, as at Tergnier (Naze 1993). In general terms, sites of *EIA1* date appear to have relatively few storage facilities, a phenomenon that Gransar links to climatic deterioration. There is much greater emphasis on storage on *EIA2* sites, and it is not uncommon for whole zones to be filled with silos or above ground storage structures (Gransar 2002b). Throughout the Earlier Iron Age, metaculture was practised, with additional species often being grown alongside the main crop;

emmer and hulled barley constituted the principal cereals, although some significant changes are apparent in La Tène A, with naked barley disappearing altogether.²⁷

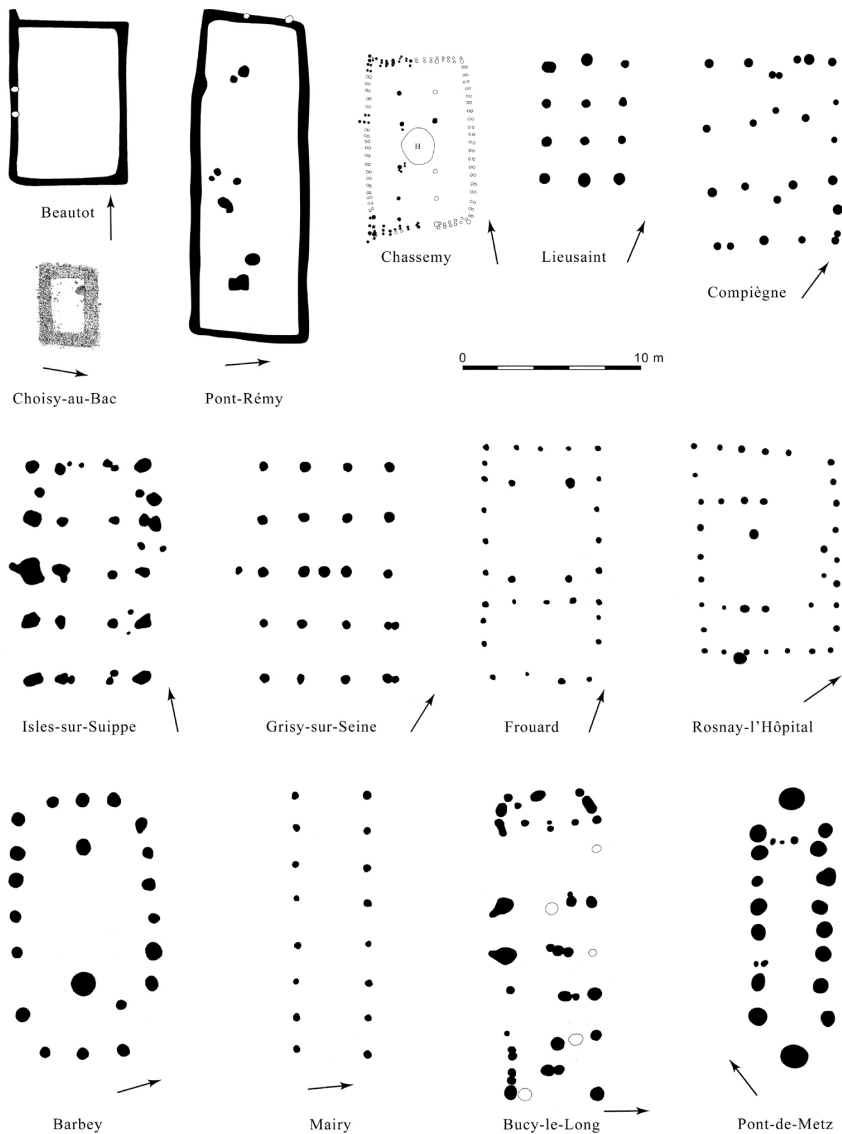


Fig. 3. Selected Earlier Iron Age rectangular buildings in northern France (for sources see text).

Faunal assemblages of the period tend not to be large, and the

more informative groups are mostly from sites occupied in Hallstatt D2–D3/La Tène A (Auxiette 1997; Méniel 2001). Against a background of mixed cattle, sheep/goat and pig husbandry, the picture is quite variable in both time and space. In *EIA1*, there seems to be an emphasis on the consumption of pig followed by sheep/goat throughout the Aisne and Oise valleys as well as at Glisy in Somme, although the proportion of pig at Choisy-au-Bac (approaching 75%) is exceptional (Auxiette 1997; Auxiette and Méniel 2005).²⁸ Small quantities of horse, dog, and wild species are generally present, the latter in quite variable proportions and led by deer. A number of changes are apparent on *EIA2* sites, including the appearance of fowl, but it is the regional variation which is perhaps most evident. Thus in the Oise valley, pig continues to predominate with cattle last, but along the Aisne valley, ovicaprines replace pig as the most frequent species, whilst husbandry in the Vesle valley was dominated by cattle (Auxiette 1997; Auxiette and Méniel 2005). Wild species continue to play a not insignificant role.

Whilst not yet commonplace, valuable integrated studies of the agricultural economy have been undertaken for a number of individual Earlier Iron Age settlements, including Bussy-Saint-Georges (Buchez *et al.* 2002), Tagnon, La Fricassée (Ardennes; Billoin *et al.* 2002), and Villeneuve, Les Étomelles (Auxiette *et al.* 2003). These offer a picture of sites engaged in mixed farming, utilising crops and animals that maximised the subsistence possibilities of their particular environment, and well capable under normal conditions of producing a surplus.

A variety of craft activity is attested, although few sites show signs of significant specialisation or production on any scale. Unsurprisingly, textile production is one of the more frequently represented activities, in the form of spindlewhorls and loomweights. Early ironworking furnaces are known from Choisy-au-Bac in Hallstatt C2 (Blanchet 1984) and Gondreville in Hallstatt D2–D3 (Deffressigne *et al.* 2002), whilst stone moulds for making a variety of bronze objects were found at Osly-Courtil (Le Guen 2005). As in Britain, there is widespread evidence for the continued use of flint and other chipped stone tools (cf. Humphrey this volume), as for instance at Trémont-sur-Saulx, La Garenne (Meuse), in a context that dates to the Hallstatt/La Tène transition

(Krzyzanowski and Lepage 1993). Pottery production is certain at a number of sites, notably Écuellen (Seine-et-Marne), where painted pottery and coarseware were manufactured alongside high-status metalwork in Hallstatt D2–D3 (Bardel 2005),²⁹ Monchy-le-Preux (Jacques and Rossignol 1996) and Villeneuve, Les Étomelles (Auxiette *et al.* 2003).

A number of sites display evidence of large-scale feasting, such as Compiègne, Fond Pernant, and Verberie, Les Gats in Oise (Ménier 2001). Structured deposits, comprising whole or parts of animals, are widespread on Earlier Iron Age settlements throughout the Paris Basin, as are human inhumations, many of them in silos (e.g. Coudart *et al.* 1981; Delattre 2000; Billoin *et al.* 2002; Rougier *et al.* 2004; Séguier and Delattre 2005). The signs are that the few finds of brooches and other personal artefacts in settlements are often structured deposits, like the Hallstatt D2–D3 brooch from La Croix-Saint-Ouen, Parc Scientifique (Oise; Talon 2005) or the pre-Duchcov and Marzabotto brooches, knife, and pin from Villes-Saint-Jacques (Seine-et-Marne; Séguier and Delattre 2005).³⁰ This lack of obviously ostentatious material culture (apart occasionally from decorated pottery) at settlements – standing in contrast to the richness of much of the burial record – is almost certainly a function of prevailing depositional practices and cannot be used as an indicator of the inhabitants' wealth.

Although most Earlier Iron Age settlements lack obvious external boundaries, it is not unusual to find the remains of palisades and/or segments of ditch within the settled area, which no longer make any obvious pattern. In some cases, these features incorporate entrances, implying that further stretches have either been lost to erosion or were continued by other means such as hedges or banks.³¹ They may have served a variety of purposes: as boundaries between different areas, for corralling animals, or to shelter specific activities, as with the substantial staple-shaped ditches found at Longueil-Sainte-Marie, Les Gros Grès (Gransar 2002b) and Tournedos-sur-Seine (Carré 1993). More regular arrangements of ditches are known at a number of settlements, where they may have delimited individual residential compounds, served for drainage, or simply be remnants of field systems subsequently colonised for settlement. They are particularly prevalent along the Oise valley, as

at Champagne-sur-Oise (Durand 1994), Fond Pernant (Lambot 1991), Longueil-Sainte-Marie, L'Orméon (Gaudefroy 1995), and Tergnier (Naze 1993), but examples do occur elsewhere, as at Grisy-sur-Seine, Les Rouqueux (Gouge and Leconte 1999) and Juvincourt-et-Damary, Le Gué de Mauchamp (Bayard 1989).³²



Fig. 4. Schematic plans of Earlier Iron Age open settlements the eastern Paris Basin.

Open settlement

As indicated, nearly all the Earlier Iron Age settlement evidence from the eastern Paris Basin takes the form of open sites. Typically,

these consist of a number of discrete nuclei of up to around 1 ha in extent (sometimes larger), characterised by varying combinations and densities of pits, silos and small post structures, and situated between 20 and several hundred metres apart from one another (Fig. 4). Despite the lack of obvious houses, the associated finds and the presence of features like hearths and ovens implies that the majority of these nuclei housed – according to their surface area – anything between one and a maximum of five or six individual domestic units or household groups, although in some cases the preponderance of a single type of feature, such as silos, indicates a more specialised function. It is also not uncommon to find empty spaces in the interior of these clusters, presumably marking the position of yards, vegetable plots or even houses.

Most of the sites studied in detail occupy sheltered, low-lying situations, but the last two decades have seen a sharp increase in our knowledge of sites on the limestone and chalk plateaux. Sites in valley-bottom locations typically make careful use of the microtopography, frequently occupying slight rises above the surrounding terraces, and are often also sited beside former river or stream channels, within which it is not uncommon to find significant quantities of pottery, cooking stone, and animal bone deposited.³³ Settlements on the higher ground show a decided preference for plateau-edge situations and are often sited close to water sources or dry valleys giving access to the slopes beneath.

In general terms, this form of organisation can be traced back to at least *LBA2*, although most settlements of that date are small, scattered across areas no more than 100–150 m across.³⁴ Some larger sites are known, such as Rosières-aux-Salines, but it is unclear to what extent the component elements are contemporary or consecutive (e.g. Talon 1992; Koenig 1999). By *EIA1*, larger residential nuclei are more frequent, as at Berry-au-Bac, Le Vieux Tordoir, where the two most extensive nuclei are of this date (Fig. 4; Pion and Piechaud 1983). Sites of Hallstatt D–La Tène A date, as well as being more numerous, tend to be larger still and contain more nuclei.

Particularly in this latter period, it becomes possible to differentiate three types of settlement unit (although the distinctions are not always clear-cut (Gransar *et al.* 1999).

- The first type of nucleus contains only sparse traces of occupation – a few pits and post structures. They tend to be isolated and are often surrounded by areas prone to flooding for up to half the year.
- The second type contains a wider range of domestic features, and their overall density is also higher. Nevertheless, a lack of *in situ* rebuilding and the homogeneity of the associated material culture imply that these nuclei were not occupied for long, perhaps only two or three decades. Unlike the first type, these units commonly occur in groups of two or three.
- The final type of nucleus is characterised by a still greater density of features and shows evidence, in the form of rebuilding, for occupation over a more prolonged period, but even here probably no more than a century or so. They are often larger in extent and have more evidence of a structured layout and internal subdivision in the form of palisades and ditch segments. Many are located beside palaeo-channels.

The first type of occupation is mainly found in the major river valleys – examples include Sermoise, Les Prés du Bout de La Ville, in the Aisne valley (Pommepuy *et al.* 2000), Mont-Notre-Dame, Vaudigny by the Vesle; (Pichon 2002), and Pontpoint, Le Fond du Rambourg on the Oise (Gransar 2002b) – but comparable sites do occur in low-lying locations elsewhere, as at Laon, Le Marais de Leuilly (Aisne; Pichon 2002) or Roissy, Le Dessus de Rayonette (Val d’Oise). Use of these sites is noticeably confined to the driest periods of the first millennium BC (Gransar *et al.* 1999), i.e. Bronze Final IIIb, Hallstatt D2–D3/La Tène A, and La Tène D. It seems likely that they were only occupied seasonally and are offshoots from more permanent settlements located nearby.

Unlike the first category, type 2 nuclei occur throughout the study area. Many are again in major river valleys, as at Gondreville on the Moselle (Deffressigne *et al.* 2002), Perthes on the Marne (Verbrugghe 2004), Verberie on the Oise (Malrain *et al.* 2005), Villers-en-Prayères on the Aisne (Hénon *et al.* 2002); and – apart from La Fosse aux Chevaux – at Limé on the Vesle (Auxiette *et al.* 1995; Hénon *et al.* 1996; Hénon 1997).³⁵

Together, the nuclei can cover a considerable area, as at

Gondreville or Rosnay-L'Hôpital – where four major nuclei were found in excavations covering 14 ha, as well as a number of lesser ones (Tappret 1993; Copret 1995; Villes 1999). Type 2 nuclei also occur on the limestone – as at Lieusaint/Moissy-Cramayel (Seine-et-Marne), where several foci of occupation have been recorded on the plateau de Sénart (Marion 2004; Boulenger 2005); or Bussy-St-Georges (Buchez *et al.* 2001) – and on the chalklands nearer the Channel coast – as at Glisy, Terre de Ville (Gaudefroy 1999) or Hautot-Le-Vatois, La Plaine du Bosc Renault (Blancquaert and Desfossés 1994).

Currently, the best attested type 3 sites are from the western two-thirds of the study area, although examples do occur in Lorraine, notably Crévéchamps (Hamm 2004). Examples in Picardy include the *EIA1* settlement at Osly-Courtil (Le Guen 2005), and La Croix-Saint-Ouen, Les Longues Rayes, where a series of buildings on a north-south axis were reconstructed up to five times (Talon and Billand 1993). In Champagne, the Camp Militaire at Suippes and Saint-Léger-près-Troyes are among a number of large, long-lived sites (Villes 1999). Nuclei of types 2 and 3 can also occur together, as at Limé, where the cluster at La Fosse aux Chevaux is longer-lived than the other foci (Hénon 1998), and at Bussy-Saint-Georges, where Le Champ Fleuri Nord was also longer and more intensively occupied than the other nearby sites (Buchez *et al.* 2001).

As we have seen, type 2 foci were characteristically only occupied for short periods.³⁶ It thus seems unlikely that all the nuclei in a site-cluster will have been inhabited at the same time, and in some cases, it has proved possible to reconstruct a detailed chronological sequence, allowing us to track apparent shifts from one nucleus to another. At Marolles-sur-Seine, Le Grand Canton (Peake 2005), the eighth century BC occupation lies to the south of a stream, but over the next two centuries, the settlement shifted progressively to the north, crossing the stream in the process. Movement can be traced from one area to another at several sites on the chalk, including Ham, Le Bois à Cailloux (Barbet and Buchez 2005), the ZAC A26–A29 outside Saint-Quentin (Pichon 2002), and Thieulloy-l'Abbaye (Millerat and Buchez 2002). Examples from further east include the *EIA1* site at Basse-Ham by the Moselle (Perrin 2000), and the *EIA2* settlement at Perthes (Verbrugghe 2004), where a small square

enclosure might conceivably be a permanent focus around which the residential units moved. At other sites like Bussy-Saint-Georges and Limé, we seem to have a combination of one unit staying rooted to the spot for at least a century and others moving every few decades.

Some sites exhibit a degree of functional differentiation: at Bouy, Le Haut Buisson, three residential units were accompanied by a fourth containing nothing but small post structures (Moreau 2001). Malrain and Pinard (1996) have suggested that several zones can be recognised at Pontpoint, Les Prés Very III: two combining silos and above ground storage structures; one of rectangular pits, and others where the pits contain structured deposits. Clusters of silos are known at several sites including Gondreville (Fig. 4), Changis-sur-Marne, Les Pétraux (Marion 2004), and Bussy-Lettrée, Le Petit Vau Boudin (Violot 2000). All three sites also had areas of craft activity, including metalworking. Another form of functional differentiation may be inferred from the presence of discrete enclosures as at Perthes and also Changis, Bucy-le-Long, and Bazoches, Les Chantraines (Fig. 5); these are discussed below.

Although at many sites, features appear to be scattered fairly randomly – at least to our eyes – others show signs of a more coherent layout. Linear arrangements of 4-and 6-post structures are commonest: these often follow the line of an adjacent palisade or ditch, as at Ciry-Salsogne (Gransar 2001; Hénon *et al.* 2002) and Limé, La Prairie in the Aisne valley (Fig. 5), Saint-Nicholas-la-Chapelle in Aube (Villes 1999), or Woippy in Lorraine (Buzzi 1995). At Nogent-sur-Seine, Les Guignons (Dugois and Villes 1995) and Grisy-sur-Seine, Les Champs Pineux (Gouge and Leconte 1999) buildings follow drainage ditches separating the settlements from wet areas, whilst at Pontpoint, Les Prés Very III (Malrain and Pinard 1996), the buildings simply ran alongside the adjacent palaeochannel. At other sites, rows of buildings are apparent, but it is no longer possible to tell what – if anything – they respected: at Bucy-le-Long, Le Chemin de Venizel, where they run for over 200 m (Auxiette *et al.* 1995; 1996), they perhaps followed a trackway. Elsewhere, buildings are ranged in arcs around an open space; examples include Ciry-Salsogne (Fig. 5), Grisy-sur-Seine, Les Terres du Bois Mortier (Gouge and Leconte 1999), Mairy, Les Hautes

Chanvières (Villes 1999), or Saint-Germain-La-Ville (Marne; Durost 2001).

In the past we have tended to associate regularly shifting settlement purely with the Low Countries and the north German Plain beyond (e.g. Bourgeois and Verlaeckt 2001; Gerritsen this volume), but the data presented here imply that in the Earlier Iron Age at least this phenomenon was significantly more widespread. In the eastern Paris Basin, settlements were evidently moving frequently throughout the period: it is unusual for foci to be occupied for more than a century, and in many cases the occupants seem to have moved every generation, albeit probably not more than a few hundred metres. To a large extent it has been the lack of obvious houses comparable to those in the Netherlands that has previously prevented us from grasping the degree of mobility inherent in the Earlier Iron Age settlement pattern.

However, whilst this void is still far from being filled, there is little doubt that we need to rethink our ideas and develop new models for the processes at work. One obvious possibility is that social units were reestablishing themselves every generation at a new locale within the overall territory of the settlement, along the lines adumbrated by Gerritsen (2003; this volume). On the other hand, we cannot necessarily rule out a role for ‘economic’ or environmental factors. We also need to establish why at certain sites, one nucleus displays less instability than the others: is this just a function of the local topography or might it indicate social distinctions between the groups living in the different kinds of unit? Open sites, however, were not the only type of settlement current in the Earlier Iron Age, and it is to enclosures that we must now turn.

Enclosure in the Earlier Iron Age

As elsewhere in Europe, the use of hilltop locations in the study area increased markedly in the Later Bronze Age, although evidence of fortification is often less than compelling. The main concentrations of hilltop sites occupied in *LBA2* are in the limestone regions at opposite ends of the study area, among them the contour fort at Saint-Pierre-en-Chastres (Vieux-Moulin, Oise) and the promontory forts at Catenoy (Oise) and Saxon-Sion (Meurthe-et-Moselle).³⁷ Saint-Pierre-en-Chastres was intensively occupied in

Bronze Final IIb and the wealth and quantity of finds (Blanchet 1984, 265–74) compares to the better-known site at Fort Harrouard (Sorel-Moussel, Eure-et-Loire).³⁸ A possible primitive rampart has been identified (*ibid.*, 265), which could date either to this period or to Bronze Final IIIb, when the plateau was reoccupied on a more modest scale. In contrast, Catenoy and Saxon-Sion were both principally inhabited in Bronze Final IIIa, although only Catenoy appears to have been fortified at this time (Blanchet and Talon 1987; Talon 1991b); at Saxon-Sion the earliest defences belong to *EIA1* (Legendre and Olivier 2003), post-dating the Bronze Final IIIa use of the hill.

After reaching a peak during Bronze Final IIIb, hilltop occupation apparently declined sharply in Hallstatt C all over France (e.g. Blanchet 1984; Milcent 2004, 49–50), although not all hilltop sites were abandoned, as the work at Saxon-Sion shows (Legendre and Olivier 2003). Given the ambiguity of radiocarbon dating at this period, it may yet prove that more hilltop sites were frequented and/or new ramparts were built during Hallstatt C–D1 than we have appreciated.³⁹ At present, however, the only permanently occupied ‘fortified’ site of this period in the study area is in a lowland setting: at Choisy-au-Bac. This started and finished life as an open settlement, but in Phase 2 (Hallstatt C1b) a stone-faced bank was constructed across the neck of the confluence, fronted by a ditch 8 m wide and water-filled to three-quarters of its depth (Blanchet 1984, 414–16; Talon 1991c).

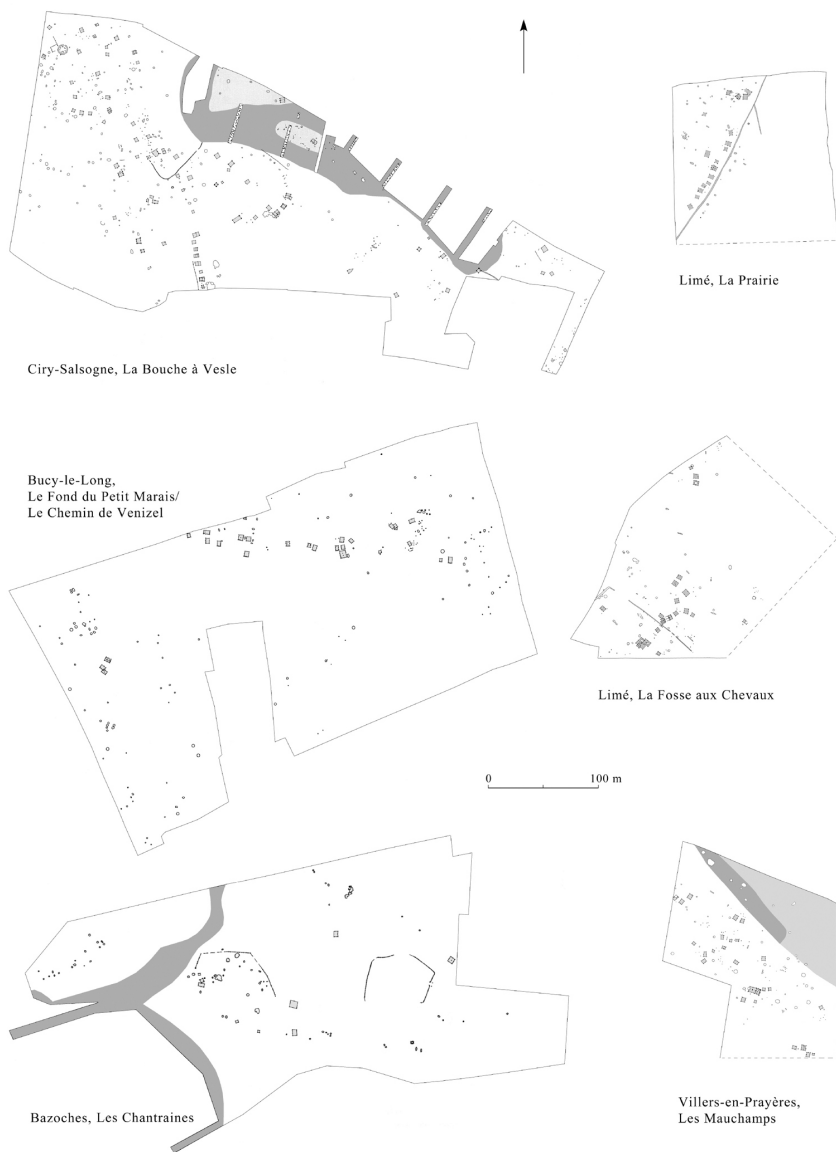


Fig. 5. Layouts of Earlier Iron Age settlements in the Aisne valley area (after Auxiette et al. 1994; 1995; Gransar 2001; Hénou 1998; Hénou et al. 1996; 2002).

This bank was only 2 m wide, but it was subsequently rebuilt on a larger scale; even then, it is a moot point whether it was intended as a military structure or had some other purpose, perhaps even

that of flood defence. After the superstructure – and at least some of the interior – had been destroyed by fire for a second time, the bank was not rebuilt. During Phase 3 (Hallstatt C2), which is considered to be the most prosperous period of occupation, the site was effectively unenclosed, except for what was left of the ditch. Another confluence site, 40 km down river at Thiverny, where salvage excavations recovered a rich assemblage of Hallstatt D2–D3 pottery (Durvin and Brunaux 1983), may well have been similar in character, whilst the site at Bernières-sur-Seine (Eure) has also been compared to Choisy on account of its riverside location and wealth of finds (Prost 1999).⁴⁰

There is little evidence for defended hilltop sites in most of northern France in the Late Hallstatt or Early La Tène period. This stands in sharp contrast to the immediately adjacent uplands of Luxembourg and the Belgian Ardennes, where several large hillforts were apparently constructed and/or frequented around the mid first millennium BC, including Saint-Servais, the Titelberg, and Wallendorf, the latter just inside Germany (Bonnenfant 1990; Krausse 2003).⁴¹ Also certainly occupied at this period were smaller fortifications like the Aleburg at Beaufort (Schindler 1969) and – in the far north, overlooking the Flanders plain – the Kemmelberg, with its Attic vase (Van Doorselaer *et al.* 1987). This is still the most north-westerly occurrence of such material in a settlement context and has led to the Kemmelberg being compared with the *Fürstensitze* like Vix-Mont Lassois (Côte d’Or) further south.⁴² More generally, there is an entrenched view that these smaller Late Hallstatt fortified sites were high-status residences, implicit in the frequent use of terms like *Herrenhof* (lord’s manor) or *Herrensitz* (lord’s seat) – although in practice there is next to no direct evidence of any kind for the status of the inhabitants (cf. Diepeveen-Jansen 2001, 65–6).⁴³

The one sizeable hilltop fortification (14 ha) in the study area, which was certainly defended and occupied in Hallstatt D2–D3/La Tène A, is the Cité d’Affrique (Messein, Meurthe-et-Moselle) at the confluence of the Moselle and the Madon. Among the finds are numerous brooches and bracelets, and other metal items such as a torc, earrings, and belt fasteners, along with wheel-made imported pottery or import copies and Massaliote amphorae (Lagadec *et al.*

1989; 1993; Tikonoff and Deffressigne-Tikonoff 2003; Hamm 2004).⁴⁴ Messein lies close to important north–south and east–west routes and clearly participated in the same interlocking long-distance social and/or economic networks as other strategically located hillforts like Mont Lassois, and – albeit at several removes – the Kemmelberg. It is time, however, to question why quite such large quantities of metalwork are found at these particular hilltop sites – and at their *LBA2* counterparts like Fort Harrouard – but it would be surprising if it did not include a strong element of structured deposition.

The number of hillforts in Lorraine occupied at this period may yet prove to be more comparable to the upland regions to the north, but so far conclusive evidence is lacking.⁴⁵ Further west, a handful of plateau-edge sites in Aisne are contenders for mid first millennium BC use (Pion 1990), but only the Montagne de Comin (Bourg-et-Comin) merits discussion here. Like Catenoy, the hilltop was originally fortified in the Neolithic (Constantin and Demoule 1983). Within a large ditch separating off the northern part of the hill, excavations revealed a black layer containing Hallstatt D2–D3 pottery, which might well be eroded midden deposit. The ditch is thought to be Late Iron Age, but Hallstatt pottery was present in the basal layers, so it might have an earlier phase (Pion 1990, 231). Either way, we have a potential example of a hilltop site in the west of the region being used for periodic gatherings and feasting in the mid first millennium BC, perhaps even a local equivalent to Messein.

Palisaded enclosures

Over the last twenty years, it has become apparent that palisades were used to enclose a variety of Earlier Iron Age sites in the eastern Paris Basin, although the known examples do not form a particularly homogenous group (Fig. 6). In broad terms, they can be divided into enclosures that form part of more extensive settlements and those where the palisades seem to represent an effective limit to the site.⁴⁶ In the former category are Bazoches, Les Chantraines (Hénon *et al.* 2002); Grisysur-Seine, Les Terres du Bois Mortier (Gouge and Séguier 1994); Oger, Midoin (Friboulet 2000); Saint-Gibrien (Villes 1999); and – less certainly, owing to the small area

excavated – Isles-sur-Suippe, Les Fontaines (Marne; Dugois 1992). The second group includes Bazancourt-Pomacle (Marne; Desbrosses 2005); Beaurieux, Les Grèves (Aisne; Haselgrove 1996); Bucyle-Long, Le Grand Marais 1 (Auxiette *et al.* 1994); and La Grande Paroisse, La Pièce des Loges (Seine-et-Marne; Bulard *et al.* 1992). So far, most of the known sites lie along the valleys of the Aisne and its tributaries, the Marne, and the Seine, which may to a certain extent reflect the pattern of research. The date range is primarily Hallstatt C–D; none of the sites post-date La Tène A.

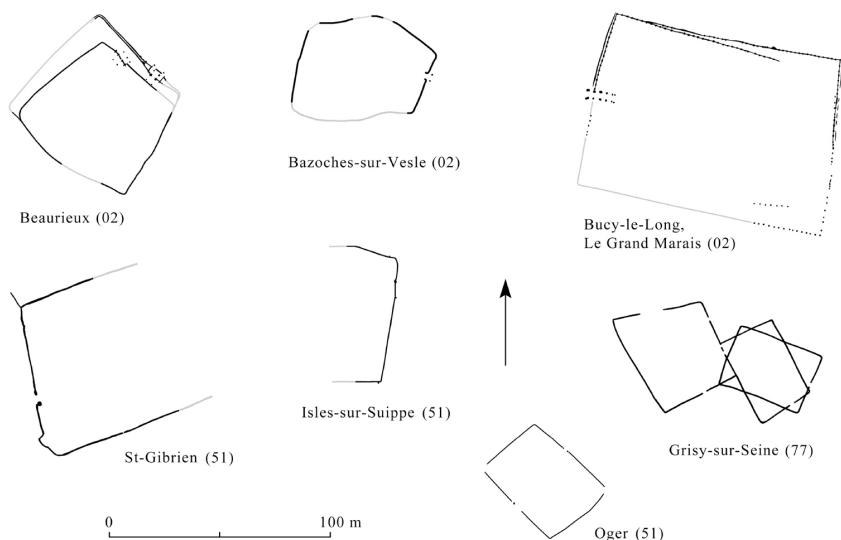


Fig. 6. Earlier Iron Age palisaded enclosures in the eastern Paris Basin.

Most of the palisades seem to be of one phase, but some were rebuilt and/or modified during their lifetime. The eighth century BC enclosure at Beaurieux was subsequently enlarged and the palisade doubled on either side of the entrance – which was itself repositioned (Haselgrove and Lowther forthcoming). Apart from a series of infant burials at the corners of the primary enclosure and special deposits of pottery in both entrance phases, the site was virtually devoid of finds, nor apart from a couple of small pits were any features definitely assignable to the occupation, although a marked cluster of postholes at the southern corner implies that there were some post structures at the edges.⁴⁷ The site at La Grande Paroisse in the Seine valley has several similarities. Like

Beaurieux, it occupies a slight rise between wet areas and is protected on the landward approach by two double palisades – presumed to be successive (Bulard *et al.* 1992). The interior yielded numerous pits and post holes, but no evidence of coherent buildings, the main difference being the plentiful finds, which included two Hallstatt C razors and an assemblage rich in painted pottery (Bulard and Peake 2005, fig. 9).

Apart from the palisade at Bazoches, Les Chantraines, which is devoid of features in the interior (Hénon *et al.* 2002), the remaining enclosures can be divided into those that contained large rectangular post hole buildings (Grisy-sur-Seine; Isles-sur-Suippe, Saint-Gibrien and possibly Pont-de-Metz),⁴⁸ and those where the interior is lined with rows of 4- and 6-post structures (Bazancourt-Pomacle; Bucy-le-Long, Le Grand Marais 1; Oger), up to 60 in the case of Bazancourt-Pomacle (Desbrosses 2005). Isles-sur-Suippe, Oger, and Saint-Gibrien also had substantial numbers of grain silos, although not all of these are contemporary with the palisades. At Grisy-sur-Seine, the compound containing the house was conjoined to a second, smaller enclosure, which was later replaced by another one of similar size, but on a completely different axis; a cluster of internal post holes may belong with either or both annexes (Gouge and Séguier 1994). Outside the house enclosure was a second large structure,⁴⁹ whilst 100 m to the east was a cluster of pits and post structures around an area of open space.

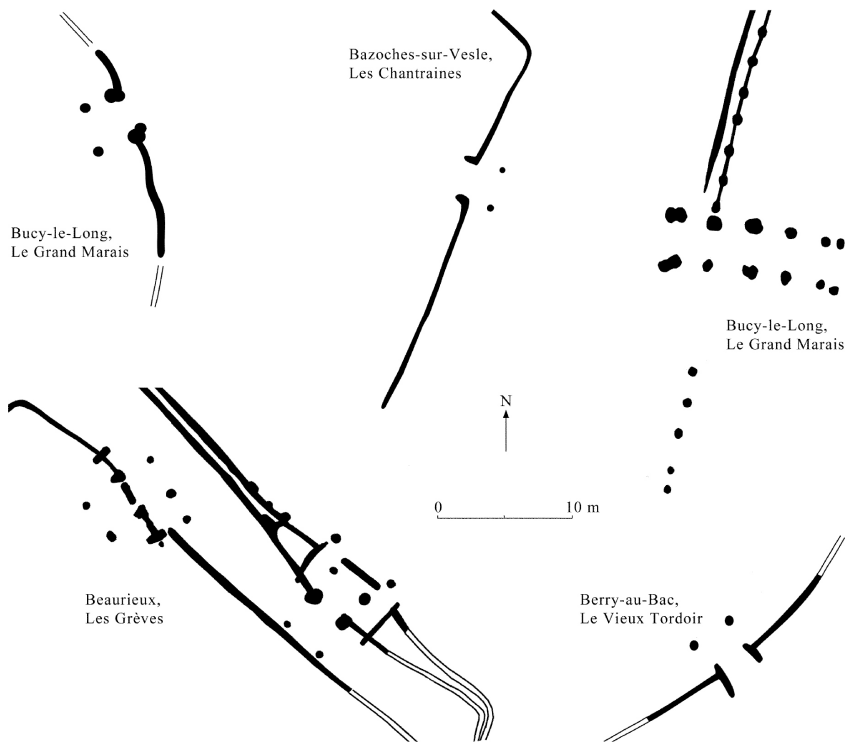


Fig. 7. Entrance arrangements on palisaded enclosures in the Aisne valley area.

It seems likely that palisaded enclosures of this form were originally more common, but have been destroyed by ploughing and/or stripping, since several terrace sites have yielded short stretches of palisade with integral entrances comparable to those found on continuous circuits (Fig. 7). Examples include Bucy-le-Long, Le Grand Marais 2 (Pommepuy and Brun 1982) – where the palisade is within 10 m of yet another large building⁵⁰ – and Berry-au-Bac, Le Vieux Tordoir (Pion and Piechaud 1983) on the Aisne; Limé, Les Sables Sud in the Vesle valley (Auxiette *et al.* 1995); and Crévéchamps by the Moselle (Hamm 2004, 52). As Figure 7 shows, the actual entrances range from relatively simple structures (Bazoches, Berry-au-Bac, Bucy 2) to more elaborate constructions that were clearly designed to impress (Beaurieux, Bucy 1, also Bazancourt, Limé) – although it could be argued that even the simplest forms are more elaborate than strictly necessary (cf. Pommepuy *et al.* 2000).

The relatively limited evidence we have at present implies that these palisades served a variety of functions. They account for more than their fair share of large rectangular buildings and in these cases a residential function appears most probable – always assuming that these buildings are in fact houses and did not serve some other purpose. Many would go one stage further and see these enclosures as high-status dwellings (e.g. Gouge and Mordant 1992; Demoule 1997),⁵¹ on the lines of the Late Hallstatt *Herrensitze* (above), but once again other finds which might support this interpretation are lacking – or, at least, have not yet been published. Others have emphasised the large numbers of storage structures present in many of the enclosures and suggested that this indicates the centralised storage of grain by a high-status group living there or nearby (e.g. Debord and Desenne 2005, 172). The main difficulty with this line of argument is that the number of storage structures is no greater than on many open settlements and at indeed at some sites the density of such features is far greater outside than inside the enclosure (Oger, Saint-Gibien).

A third group of sites show no signs of either having contained dwellings – although this argument cannot be pushed too far – or having been used for storage. In the absence of more concrete evidence, one might suggest a role connected with animal husbandry. Enclosures like Bazoches, situated within a larger settlement, but devoid of any surviving internal features, could well be stock compounds, whilst it is tempting to suggest that Beaurieux and La Grande Paroisse were seasonal settlements, occupied in summer to exploit the river meadows for grazing. This would help explain the concentration of rather nebulous features in their interiors, if not why Beaurieux at least required such an elaborate entrance. Another possibility that we should consider is that such sites acted as some kind of permanent focus or meeting place for shifting settlements in the vicinity (cf. Perthes, above).

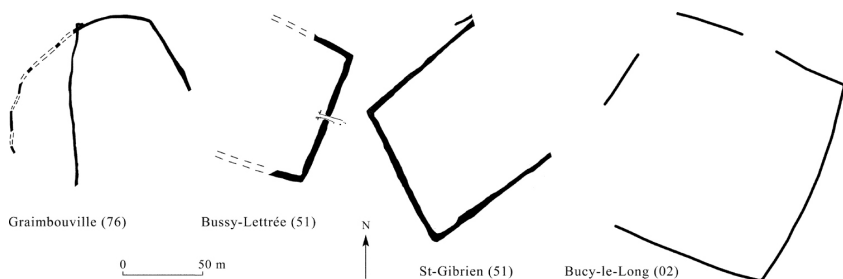


Fig. 8. Earlier Iron Age ditched enclosures in the eastern Paris Basin.

Ditched enclosures

The practice of fully enclosing settlements with ditches – as opposed to using segments of ditch to define or separate areas within more extensive open settlements – seems to be an almost entirely Later Iron Age development in most of the Paris Basin (cf. Haselgrove 2007). Nevertheless, a few *EIA2* ditched enclosures are known in the study area. One of the earliest is a small trapezoidal enclosure partly revealed within a larger Hallstatt D2–D3 site at Isle-Aumont (Aube). The excavator interpreted this as a cult structure (Scapula 1975), but Villes (1999, 29) suggests that the ditch might instead have enclosed a large residential building of which no traces survive, on what seems to be a settlement of fairly high status.⁵²

Also in Champagne, but much larger, is the enclosure at Saint-Gibrien (Fig. 8). This is thought to have replaced the palisaded compound mentioned above, but is displaced to the south. The new enclosure was larger than its predecessor, with sides 100 m long, and contained a large central building, assumed to be a house, as well as smaller structures (Villes 1991). The ditch itself was 4–6 m wide and up to 2.5 m in depth. An annexe attached to its northern side, overlying the earlier palisaded compound was apparently for storage. Villes (1999, 50) dates the ditched phase at Saint-Gibrien to the fourth and third centuries BC and possibly the second century BC as well. Eventually the ditch was replaced by a new palisade, its position shown by a line of post holes on the inner lip of the ditch. A fourth-century BC construction date would be particularly early for an enclosed settlement in Champagne, where open sites apparently continued to be the rule rather later than in areas further west (Haselgrove 2007).

A degree of caution is, however, required as the detailed dating

evidence for this long-lived settlement has not been published.⁵³ Nevertheless there is no obvious reason to reject an EIA2 date, particularly as two other comparable sites are known in Marne, both in similar elevated positions. The enclosure at Bussy-Lettrée, Le Mont de Maisses (Fig. 8), is 90 m square, slightly smaller than Saint-Gibrien, but excavations were confined to the line of the A26 (Verbrugghe 1991). Verbrugghe considers the internal bank too slight to be defensive or even ostentatious, although the entranceway is reminiscent of some of the palisaded sites. A La Tène B date is suggested.⁵⁴ The earthwork at Haulzy, near Vienne-La-Ville, cuts off the corner of a plateau overlooking the upper Aisne valley, at the edge of the Argonne massif. On the basis of some early sondages, Haulzy is generally attributed to the Late Hallstatt period, overlapping with the nearby Hallstatt C–La Tène A tumulus cemetery (Freidin 1982; Villes 1999). The enclosed area is similar to Saint-Gibrien.

Occupying a different setting and far better dated are two square cropmark enclosures on the Aisne terraces near Soissons: one at Villeneuve-Saint-Germain, within the well-known La Tène D2 *oppidum* (Debord 1981), the other at Bucy-le-Long, La Grande Pièce de la Croix

Rouge (Fig. 8), within 1 km of the rest of the complex discussed above (Debord and Desenne 2005). The ditch defining the Villeneuve site is on the same scale as Saint-Gibrien, that at Bucy smaller.⁵⁵ Sampling of the ditches at both sites yielded La Tène A pottery, but the interiors have not been investigated, although two contemporary pits were found in the corner of the Bucy enclosure.

Given the limited excavations at all but one of these sites, discussion of their function is difficult. Based on Saint-Gibrien, it is tempting to follow Villes (1999) and see the three larger Champagne enclosures as small, defended settlements on the model of Late Hallstatt sites like Beaufort. Although usually classed as a hillfort because of its Priest type rampart, Beaufort is in fact the same size as the Champagne sites (1 ha).⁵⁶ Nor is the later date of Bussy-Lettrée and Saint-Gibrien a problem, since the first group of middle Rhine–Moselle hillforts like Beaufort, in use from Hallstatt D2–D3 to La Tène A, are followed by a second series, which start in La Tène B2 and remain in use in La Tène C–D (Diepeveen-Jansen

2001). This second wave also includes small fortified sites, typified by the Altburg bei Bundenbach in Germany (Schindler 1977), although none of them are as small as Beaufort.⁵⁷ We may therefore be seeing similar rhythms of development in both regions, with the difference that more ditched enclosures in Champagne have been flattened by the plough.

On the other hand, as Verbrugghe (1991) admits, the Bussy-Lettrée enclosure need not have been inhabited; and this seems even less probable for the two Aisne valley sites. They are more likely to have been social or religious foci for the looser settlement complexes in the area, much as we see on a smaller scale at sites like Perthes, Isle-Aumont, and perhaps even some palisaded enclosures.⁵⁸ At present, some of the best parallels come from Belgium, particularly the square Early–Mid La Tène hilltop enclosure at Hannut (Bosquet and Preud’homme 2000). This is comparable to the Aisne valley sites in area (1.74 ha) and the ditch is on the same scale as Villeneuve, with a single entrance at the southeastern corner. The interior was systematically trial trenched and then part excavated prior to the building of the Belgian TGV. No traces of habitation were discovered, but two dumps of pottery and lithic debris were found associated with hearths in the upper levels of the ditch, along with two pits containing more pottery and burnt material, on the strength of which it is proposed that the site was used for feasting and other ceremonial gatherings.⁵⁹ A cult role is also proposed for a smaller hilltop enclosure at Kooigen, sited within defences which may or not be contemporary (Van Doorselaer 1989). This yielded a mass of pottery dating to the Hallstatt D–La Tène A transition spread across the interior, together with at least one special deposit in the ditch, and is perhaps best compared with the smaller enclosures at Isle-Aumont and Perthes.

The indications are that enclosed settlements first became widespread in the regions closer to the Channel coast (Haselgrove 2007). The origins of this development may perhaps be seen in the higher incidence of ditch systems in the fifth and fourth centuries BC in the west of the study area and in the chalklands beyond. Attention has already been drawn to a number of ‘partially enclosed’ settlement units in the Oise valley, whilst several Early La Tène ditch systems associated with settlements were found on the

A29 motorway in Normandy (Rougier 2000). The latter sites are often of curvilinear rather than rectilinear form, as at Grambouville, La Brière (Seine-Maritime), where an oval enclosure of La Tène A date was subdivided internally into uneven parts, with settlement concentrated in the larger, eastern half (Fig. 8). A similar pattern is apparent in Artois, where long-lived ditch systems associated with settlement and apparently with fifth century BC origins are known from Dourges and Raillencourt (Blancquaert *et al.* 2003). The long-lived settlement complex at Arras, Les Bonnettes (Pas-de-Calais) was already partially enclosed in its Early La Tène phase (Jacques and Rossignol 2001).⁶⁰

Settlement developments at the end of the Earlier Iron Age

In contrast to the high level of continuity into the Later Iron Age apparent on these Artois sites, the end of the Earlier Iron Age emerges as a period of marked discontinuity throughout the study area proper. This first becomes apparent in the settlement pattern with the abandonment in La Tène B1 of many of the locales inhabited throughout the fifth century BC and affected other aspects of the record, including the cemeteries, during La Tène B2 (cf. Haselgrove 2007). The handful of settlements in the eastern Paris Basin where occupation is known definitely to have carried on into La Tène B2 are on the chalk and include the open settlements at Saint-Quentin⁶¹ and Ham – where the last of three nuclei dates to Aisne-Marne IV (Barbet and Buchez 2005) – and the Grambouville and Saint-Gibrien enclosures. Only at Saint-Gibrien, however, does occupation carry on into La Tène C1.⁶² The number of new foundations in La Tène B2 is equally small: a short-lived double-ditched enclosure at Fontenay-en-Parisis, Les Vignes (Val d'Oise); another enclosure at Venette in the Oise valley, which developed into a more substantial settlement in La Tène C1 (Malrain 2003); and the extensive open settlement at Bussy-Lettré, Le Petit Vau Boudin (Violot 2000).⁶³

In the Aisne and Vesle valleys, this gap in settlement is partly filled by the appearance in La Tène B of a new type of site on the alluvial terraces in the form of isolated batteries of grain silos (Fig. 9). All told, five silo batteries dating to this period are known: at

Berry-au-Bac, Le Vieux Tordoir (Chartier *et al.* 1992); Cuiry-lès-Chaudardes, Les Fontinettes (Ilett and Gransar 1999); Limé, Les Sables Nord (Gransar 2002b); Soupir, Le Champs Grand Jacques (Gransar 2002c); and Villeneuve-Les Étomelles (Hénon 2001). The number of silos varies from under 20 (Limé, Villeneuve) to over 100 (Soupir), although it is clear from inter-cutting – common at Soupir, albeit infrequent elsewhere – that not all them were in use at the same time. At Villeneuve, the pits are spread out thinly on a linear axis, whereas elsewhere they form more compact clusters, which at Cuiry can be broken down into short alignments of three to five silos (Gransar 2002b). Characteristically the fills are clean of finds – another indication of the lack of nearby settlement – making it very difficult to estimate how long a battery was in use. At Soupir, for example, where 15 sherds were found, all we can say is that none of the forms or fabrics obviously pre- or post-date La Tène B (Gransar 2002c).

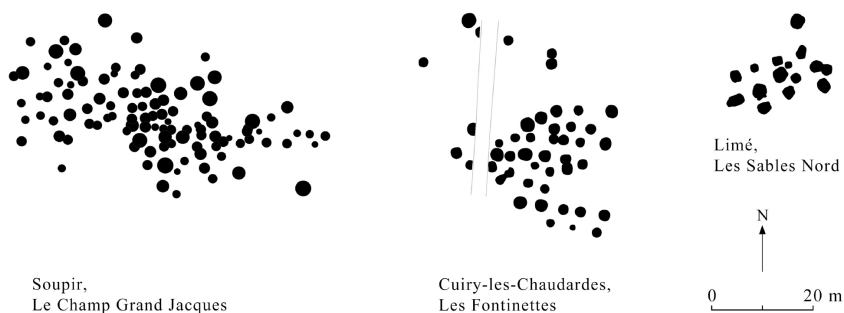


Fig. 9. Batteries of storage silos in Aisne (after Gransar 2002b; 2002c).

Small batteries of silos are found in the area as early as Hallstatt C – at Cuiry-lès-Chaudardes, Les Fontinettes (Demoule and Ilett 1982) and Longueil-Sainte-Marie, L'Orméon (Gaudefroy 1995) – and they are not uncommon at or near settlements of Hallstatt D2–D3/La Tène A date, as at Bucy-le-Long, Les Longues Raies (Gransar 2002b), Changis-sur-Marne (Marion 2004), or Gondreville (Fig. 4 above). Their growing importance in the fourth century BC is perhaps emphasised by the presence of silo batteries at two of the three La Tène B2 open settlements noted above (Bussy-Lettré; Saint-Quentin) and at three other sites of this period recently excavated on the TGV Est in Marne: at Auve; Bussy-le-Chateau, Bout des

Fosses; and St-Hilaire-au-Temple (Feray, 2001). Nevertheless these sites differ from their counterparts by the Aisne in having yielded some traces of settlement, however unintelligible, and their interest lies rather in the implication that grain was being drawn in from a wider area than before.

Gransar (2002b; 2002c) has discussed the possible functions of the Aisne valley silo batteries. He argues that they were not for domestic storage or storing seed corn, owing to the lack of nearby settlement, and the spoil would have made them too visible for concealing grain reserves at a time of insecurity. Gransar therefore proposes that the batteries were used to store grain destined for exchange and that they were shared by groups of settlements. But without more information on the wider changes in settlement at this time, it is impossible to eliminate any of these alternatives; the one thing we can say is that whatever became of the inhabitants, the presence of the silos shows that the terraces were still used for agriculture and not completely abandoned.⁶⁴

Conclusions

As I indicated above, it remains unclear whether there was a real fall in settlement numbers – and thus in population – during *EIA1* and again, more spectacularly, at the transition to the Later Iron Age, or whether this impression is primarily an artefact of diminished site visibility. What does seem beyond reasonable doubt is that these changes and the episodes of worsening climate are in some way linked. In the abstract at least, it is easy to see how, if certain factors conspired to disrupt the prevailing pattern of regularly shifting settlement in favour of greater attachment to specific places – so that groups remained anchored to the same location for generations – this would sharply depress the number of sites to be found, without the overall population density having altered. Moreover, if this also involved even a minor displacement in preferred location that removed settlements from an intensively researched topographical zone (the gravel terraces) into areas that have seen little work, the effect on the archaeological record would be little short of dramatic. This appears to be the case in the middle Aisne valley, and could well apply to other major river valleys, although not necessarily on the same scale.⁶⁵

One aim of this study has simply been to highlight the range and quality of the Earlier Iron Age settlement data now available through northern France. What was long dismissed as fragmentary and uninformative can now be seen as complex and multi-faceted. The open settlements that make up the bulk of the record took a variety of forms, from seasonal sites used in the exploitation of particular resources, through farmsteads that moved every generation, to larger nuclei that show a comparative attachment to place. Rather than thinking of open settlements as uniform dots on the map, we need to unravel the spatial and temporal interconnections and variability of the nuclei making up individual neighbourhood groups and to consider their meaning in social terms. Equally, whilst not as common, the role of enclosed sites has certainly been underplayed: palisaded sites especially are a more significant component of Earlier Iron Age settlement than previously allowed and played a variety of roles.

We also need to stand back from the evidence and consider the bigger picture. Regularly shifting settlement can no longer be seen as the preserve of the low-lying countries bordering the North Sea, although the precise form it takes in northern France may yet prove to be different in character. At the same time, in the eastern Paris Basin and middle Rhine–Moselle region, we have two areas which are often considered together on account of their rich Early La Tène burials, but which seem to have quite different settlement patterns: one dominated by enclosure, the other not. In many respects, the contrast is reminiscent of one familiar in Britain between areas without hillforts and hillfort-dominated landscapes like Wessex, whilst there are particular affinities between the Earlier Iron Age settlement pattern of the eastern Paris Basin and the ‘splurgy’ landscapes (Hill 1999) of East Anglia. There is a moral here: due to the wealth of the burials, there has never been any question of writing off the Aisne–Marne region, despite the seemingly uninspired settlement record – indeed it is generally seen as a core area – whereas all too often the non-hillfort landscapes of Britain are dismissed as somehow secondary to mainstream developments.

But we must now move beyond characterising the settlement data, and find ways to exploit this evidence to gain a better understanding of the dynamics of Earlier Iron Age societies,

building on the start made by French colleagues in analysing and integrating the structural, material, and environmental evidence left by these communities (e.g. Gransar *et al.* 1999; Billoin *et al.* 2002; Le Guen 2005). This poses something of a methodological challenge, from the problems of accessing the grey literature to the sheer volume of accumulated archaeological material. For the earlier part of the period, even basic dating is still problematic (cf. Brun *et al.* 2005), let alone constructing chronologies fine enough to establish the detailed internal chronology of settlement clusters, although more routine use of scientific dating methods would certainly help.

More information is needed from certain areas of the landscape, such as the side valleys, plateau edges, and waterless chalk plains. Motorway archaeology will only ever offset the bias towards the alluvial terraces at a very general level; if we are fully to exploit the high-quality information already acquired from the main river valleys, this will necessitate the development of complementary research programmes targeting these other environments. Similarly, there are many components of the settlement pattern about we still know very little, but which must have played as important a part in structuring everyday life as the home settlements: water-holes, fields, activity areas and territorial markers.

To date the analysis of Earlier Iron Age settlement has of necessity been mainly broad-brush. A next step will be to extend detailed studies of the kind so far only undertaken at a few sites (e.g. Hénou *et al.* 2002; Auxiette *et al.* 2003) to all the components of the settlement record at particular locations, and to do this on a broad scale in order to bring out similarities and differences between individual clusters. Only then can we hope to construct more nuanced models to explain the cycle of territorial shifts, reconstruct the nature and dynamics of the social units involved, and situate these against a background of longer-term climatic and environmental trends. At the same time, we need to develop a contextual account of the everyday realities of social life, revolving around the houses, fields, daily tasks, and routine movement around the landscape.

This brings us to a final set of issues. Can we recognise a social hierarchy, as has been argued from the burials and some

settlements, or should we envisage a more heterarchical social structure? Can we recognise meaningful territorial groupings of settlement at neighbourhood and regional level or the social and economic networks in which all communities must have participated? This entails not only integrating the burial and settlement records, but also seeking to assimilate these with other locales of power, memory, and communal cohesion, such as cult foci and places of assembly. Already there are some places where we can start to do this, as for example at Bucy-le-Long, where a range of settlement units, enclosures and cemeteries exist in close proximity, most of them subjected to large-scale excavations over the last 30 years.

Acknowledgements

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Notes

1. In administrative terms, my principal study area covers the departments of Aisne (02) and Oise (60), which together with Somme (80) make up the modern region of Picardy; Ardennes (08), Marne (51), and the northern edges of Aube (10) and Haute-Marne (52) in Champagne-Ardenne; Seine-et-Marne (77) and Val d'Oise (95) in Ile-de-France; and Meurthe-et-Moselle (54) and Meuse (55) in Lorraine. I also refer occasionally to sites in Normandy (Eure; Seine-Maritime) and in Nord-Pas-de-Calais.
2. The 'Dry Champagne' plain is nowadays covered by generally poor and thin soils and, prior to the adoption of modern farming methods, was used primarily for grazing sheep. This seems somewhat at odds with the archaeological wealth of the region and contrasts sharply with the adjacent plateaux of Picardy and Ile-de-France, which retain a covering of loess, which produces fertile loam soils (*limon*), making that part of the Paris Basin one of France's richest agricultural landscapes. Some loess deposits do, however, exist on the Dry Champagne and evidence is accumulating to suggest that the original soil cover was more fertile but has very largely been lost to erosion caused by agricultural intensification from the Later Iron Age onwards (Chossenot 1997, 24–8; Fechner *et al.* 2001).
3. Lacking enclosure ditches, Earlier Iron Age settlements are generally difficult to identify from the air and even when detected through the presence of features like pits cannot usually be assigned with any certainty to this particular period. Many of the Earlier Iron Age sites in the Aisne and Vesle valleys were in fact found in the investigation of sites of other periods, from Neolithic to Gallo-Roman. A survey of some 40 km² of the valley floor, associated slopes, and plateaux showed that Earlier Iron Age sites can be found by fieldwalking (Haselgrove 1996; Pichon 2002), although the friable character of the pottery and lack of diagnostic forms makes it difficult to date most sites to a specific phase within the period.
4. The main motorways constructed since the 1980s are the A5 Paris–

Chaumont; the A26 Saint-Quentin-Troyes; and the A29 St-Quentin-Rouen. Several Earlier Iron Age sites were also found on the A16 Paris-Boulogne, north-west of Amiens. The first motorways in the region, the A1 and the A4, were built with next to no archaeological work, but the TGV Nord and Est, which follow broadly the same routes, underwent archaeological evaluation and excavation.

5. For a fuller discussion of the development of rescue archaeology in Picardy and the surrounding areas since the 1970s, see Haselgrove (2007).

6. All but five of the 45 sites plotted on Figure 2 are on the terraces. The exceptions are Amifontaine, Le Petit Ranicourt and La Queue d'Alonde, and Juvincourt, La Fosse au Vertillon (Pichon 2002), on the A26 motorway; Ploisy, Le Bras de Fer, a ZAC on the plateau near Soissons (Gransar 2002a); and Bézannes, Les Marsillers, on the edge of Reims (Verbrugge *et al.* 1997). It was also the A26, rather than gravel extraction, which led to the discovery of the important Earlier Iron Age settlements on opposite banks of the Aisne at Condé-sur-Suippe, Le Déprofundis (De Labriffe and Sidera 1987) and Le Gué de Mauchamp (Bayard 1989). A sixth site was found on the A26 at Athies-sous-Laon, La Ferme de la Mouillé (Pichon 2002), just off Figure 2.

7. These figures may well be inflated by the manner in which sites are defined and by the short duration of many of them. Due to the tendency of Earlier Iron Age settlements to move at regular intervals and/or to comprise discrete spatial units, the number occupied at any one time may have been fairly small. For example, an unusually high density of second and earlier first millennium BC 'habitats' (0.6/km) is recorded along the 40 km of the A29 east of Amiens (Brun *et al.* 2005, 100), but once the more nebulous sites are discounted, this leaves only two significant settlements of Hallstatt date – at Cachy and Framerville-Rainecourt (Rougier *et al.* 2004) – and another five from the Early La Tène period.

8. Outside the Paris Basin, the impact of development has been more variable. Within the area of the Auvergne, Centre, and Limousin examined by Milcent (2004), for instance, modern development has been concentrated around Clermont Ferrand and evidence of Earlier Iron Age settlement elsewhere is consequently still very limited.

9. Since 2002, a new regime has been in operation on the gravels, which will almost certainly adversely affect the recovery of Earlier Iron Age settlement evidence. Until 2001, gravel companies were obliged to strip the topsoil from the whole area to be exploited under archaeological surveillance, followed by excavation as required (Malrain *et al.* 2005, 136). As well as reducing the likelihood of less

obvious features being missed, this allowed areas round settlements to be explored and zones devoid of activity to be defined. Nowadays, the requirement is to open evaluation trenches over 10% of the surface to be extracted – the same procedure as for roads and ZACs – followed, or not, by more extensive excavation depending on the results, thereby greatly increasing the chance of material going unrecorded.

10. Brun's figures indicate a tenfold increase in iron objects deposited between Bronze Final IIIa and IIIb. Given the problem of distinguishing Bronze Final IIIb assemblages from those of Hallstatt C, this figure may well be inflated. All told, approximately 30 iron objects can be listed from certain Bronze Final IIIb contexts at 20 sites, concentrated in the Alpine margins, Burgundy and west-central France (Milcent 2004, 50–2).

11. Blanchet (1984, 435) lists 13 hoards for this period from the six northern departments and a wide range of single finds, compared to a mere seven hoards after 800 BC, all small and nearly entirely of Armorican axes (of which there are also c. 40 single finds). The eastern Paris Basin also has its share of bronze and iron Hallstatt C swords (O'Connor this volume, figs. 5–6; Milcent 2004, figs. 58–59), the former coming mostly from the river valleys and wet contexts in the west of the region, the latter from the eastern half and more often in graves, so that it is not just the distributions that complement one another, but also the associated depositional practices. Only in the Low Countries do the distributions merge, a consequence perhaps partly of the shift to grave deposition and away from wet contexts in that region (Fontijn and Fokkens this volume). Hallstatt C burial practices in the eastern Paris Basin display a similar geographical split to the swords (Freidin 1982; Baray 2004), with tumulus burial (both cremations and inhumations) sometimes containing iron swords (e.g. at Haulzy, Marne), practised in the Argonne, Lorraine, and southern Champagne, whilst the zone nearer the Channel had a scatter of flat-grave cremations and inhumations – as at Acy-Romance (Lambot 1989a) – but is most notable for its lack of visible burial. The late sixth and fifth centuries BC saw the spread of flat-grave inhumation cemeteries throughout the Aisne–Marne area, and, in smaller numbers, western Lorraine and the Ile-de-France. Cremation is sporadically found alongside inhumation and by the later fourth century BC starts to occur more regularly north-west of the Oise, where the characteristic Later Iron Age cremation rite first took hold (Haselgrove 2007).

12. Diepeveen-Jansen (2001, 18) criticises Demoule's periodisation for allocating too much time to the earliest phases of the Aisne–Marne culture, when the cemetery material is most abundant, and not enough

to the later stages.

13. At Gondreville in Lorraine, the affinities of the ceramic assemblage appear to lie principally with other sites in eastern France (Defressigne *et al.* 2002, 146–59).

14. Whether conceptually Hallstatt D1 should be placed with the previous or following period remains a matter of debate (Brun *et al.* 2005, 102–3). I would see changes regarding the individual and society in Hallstatt D1 very much as anticipating developments in Hallstatt D2–D3 and have therefore placed the break at the start of the period, but on ceramic grounds, it can be argued that Hallstatt D1 is best seen as a continuum with Bronze Final IIb– Hallstatt C, and that the onset of Hallstatt D2–D3 forms a more significant break in the sequence.

15. Radiocarbon was used to date several sites on the route of the TGV Est, including the *EIA1* settlement at Bouy, Le Haut Buisson (Moreau 2001) and a battery of Early to Middle La Tène silos at St-Hilaire-au-Temple, Le Raidon (Flotté 2001). As yet, however, the tendency is to use radiocarbon when no other dating is available, rather than as an independent control.

16. The radiocarbon-based chronology for the Bronze Age to Iron Age transition in Britain (Needham *et al.* 1997) disposes of an anomaly noted by Brun *et al.* (2005, 102), comparing the pottery from Saleux, Les Traneau (Somme) – which is attributed to the late eighth to early seventh century BC (Blanchet Period IIa) – to material from Petters Sports Field in Surrey, for which they cite a seventh to sixth century BC date. Brun *et al.* see this as raising the question of conservatism in the Atlantic sphere. On current dating, however, Petters runs from the ninth century BC into the Earliest Iron Age (Needham this volume) and so comfortably overlaps Saleux. For a discussion of radiocarbon dating and Bronze Age and Iron Age chronology in the Netherlands, see Lanting and Van der Plicht (2001–2).

17. At Houdancourt, the tree-ring samples come from four timber structures protruding into the palaeochannel. The sequence spans the period 586–438 BC (Valentin *et al.* 1990) contemporary with the nearby Early La Tène settlement. They are interpreted as bridges, but might instead have had a ritual purpose like the Fiskerton jetties (Field and Parker Pearson 2003). The stake alignments and timbers found at Bazoches-lès-Bray appear to be the remains of a series of platforms or trackways built between 423–407 BC or, in a few cases, in the generation before or after (Peake *et al.* 2005). A substantial quantity of Early La Tène pottery in fresh condition was recovered, as well as animal bone – and a further group pottery which appears to be residual from a settlement on the nearby gravel island, which was occupied in

LBA1 and again in Hallstatt C–D1, but not when the wooden structures were in use. At Sorrus, the tree-ring samples accord with the other indications that salt making began there at the end of the *EIA2*; one well gave a date of 303 BC and a second was constructed in 292–291 BC (Desfossés 2000, 215–358).

18. In 2004, the Regional Archaeological Service for Picardy had records of 144 settlements dating between Hallstatt D2–D3 and La Tène B2 (Brun *et al.* 2005), equivalent to *c.* 50 per century, compared to 262 of Later Iron Age date (Malrain *et al.* 2005) or *c.* 120 per century. The number of recorded settlements dating between Bronze D and Hallstatt D1 is 126 (*c.* 15 per century). However, in covering a period of some eight centuries, the latter figure conceals a significant rise in *EIA1* settlements compared to *LBA1* and *LBA2* here and in other areas of the eastern Paris Basin.

19. For typologies of smaller structures, see e.g. Deffressigne *et al.* (2002); Hénon *et al.* (2003).

20. Based on fragments of sill-beam and a cluster of what would be internal post holes, three large buildings of this type are proposed in Zone 4 at Gondreville (Deffressigne *et al.* 2002, 121).

21. The widespread use of post pads is another possibility to consider. At Villemaur-sur-Vanne (Aube), the positions of the posts belonging to a sizeable rectangular building of *EIA1* date are represented by concentrations of stone (Deffressigne *et al.* 1995, 117). Unfortunately the published plan lacks a scale, nor is it made absolutely clear whether these were pads on the ground surface or the remains of packing. At Pontpoint (Oise), it is suggested that a series of Early La Tène timber-lined pits could have been storage ‘caves’ in the corners of rectangular sill-beam buildings (Gaudefroy 1996), prefiguring an arrangement commonly found in Later Iron Age structures (e.g. Haselgrove 1996).

22. In my view, what is usually presented as another very large ‘building’ at Grisy-sur-Seine, Les Terres du Bois Mortier (Gouge and Séguier 1994, fig. 5), is more likely to comprise a smaller rectangular post-built structure set in a fenced compound. In general terms the Grisy construction recalls *EIA1* cult enclosures such as Acy-Romance, Le Terrage and Doucier (Jura) (Lambot 1989a; 1989b), and might instead be a cult focus for the surrounding settlement.

23. One half of what appears to be a sort of ‘double pile’ building at Tergnier, Les Hauts du Riez has a possible apsidal end (Naze 1993).

24. At Sivry-Anté, La Queue des Yvarts, and Les-Petites-Loges, La Grande Lèvre Remembré, both in Marne (Frangin 2001): they consist of three paired wall posts, with two projecting gable posts, forming an

elongated hexagon. Buildings of similar form, albeit different dimensions, are known at Perthes (Haut-Marne) and Ciry-Salsogne, La Bouche à Vesle (Aisne). Sometimes, as little can survive of a building as its four main end or corner posts, much too far apart to be a 4-post structure, as for example at Woippy, Le Poillieu, in Lorraine (Buzzi 1995).

25. Assuming this remarkable 33 m long building is in fact contemporary with the fortifications.

26. For example, at Cahagnes, Benneville, radiocarbon-dated 900– 700 cal. BC or Courselles-sur-Mer, La Fosse Touzé, dated between the early fifth and mid fourth centuries BC (Jahier *et al.* 2000, 340– 7). A possible circular post-built structure of Bronze Final III date is claimed at Châtenay-sur-Seine, Le Pré de Sécherons (Seine et Marne; Villes 1981), but the palimpsest of post holes can be interpreted quite differently, for example as a two phase orthogonal layout (cf. Mordant and Gouge 1992).

27. For a detailed survey of crop husbandry, see Matterne (2001). Other changes in Early La Tène include a reduction in the amount of millet grown, and an increase in spelt and oats. Among the vegetable crops, lentils declined in importance, whilst peas and beans increased. In general terms, the number of food species on Early La Tène sites is higher than on Late Hallstatt sites, a diversification with its roots in Hallstatt C. There were also changes in crop processing technology: in the Aisne valley, *EIA1* saddle querns are generally of limestone and of rounded form, whereas in *EIA2*, they tend to be made of grès and are more angular and better finished (Pommepuy 1999).

28. Patrice Méniel suggests that the exceptional frequency of pig remains at Choisy – up to 80% in some contexts – might indicate that the inhabitants specialised in curing pork for exchange. The carcasses were split in two, as they are today, but not a technique found on other Iron Age sites in the region.

29. The metalworking evidence includes part of a clay mould for a bronze torc (*ibid.*, 213–14).

30. Such practices are occasionally attested in the Late Bronze Age, as at Chevières, Le Marais (Oise), where two small bronze daggers of Bronze Final I–IIa type were placed in a pit with Bronze Final IIb pottery (Talon 1991a). Many off-site finds can be seen in the same light, e.g. the Hallstatt D2–D3 antenna dagger and two La Tène A swords found in a ford at Cannes-Écluse, no distance away from a contemporary settlement (Séguier and Delattre 2005, 243–4).

31. A handful of more complete enclosures forming part of larger settlement complexes will be discussed below.

32. A few Earlier Iron Age settlements on the alluvial terraces reoccupy the site of earlier causewayed camps, whose vestigial remains may have served to delimit the main core of the settlement; examples include Grisy-sur-Seine, Les Rouqueux (Gouge and Leconte 1999); Mairy, Les Hautes Chanvières (Ardennes; Villes 1999); Maizy-sur-Aisne, Les Grands Aisements (Le Bolloch and Farrugia 1983); and Osly-Courtil (Le Guen 2005).
33. In the Aisne Valley, it was frequently the presence of quantities of pottery in the adjacent palaeochannels rather than over the site itself that gave rise to discovery of Earlier Iron Age settlements through fieldwalking (Haselgrove 1996).
34. Typical examples of small *LBA2* open settlements include Chevrières, La Plaine du Marais and Feuillères in Picardy (Talon 1991a; 1992) or Jouy-aux-Arches and Metz-Borny in Lorraine (Klag 2000; Thierot 2000).
35. Other extensive valley-bottom settlements with several nuclei include Grisy-sur-Seine, Les Rouqueux; Mairy, Les Hautes Chanvières; and Void-Vacon (Meuse; Provost and Mourot 2002).
36. Although we ought also to consider the possibility of shifts of settlement within larger nuclei, like those at Gondreville.
37. For other hilltop sites potentially occupied in *LBA2* in Picardy, see Blanchet (1984, 355–8); for western Lorraine, see Provost and Mourot (2002, 73–83) and Hamm (2004, 42–56).
38. Brun (1993) draws attention to the particular concentration of *LBA2* fortified sites, including Fort Harrouard and Saint-Pierre-en-Chastres, in what he sees as a buffer zone between the Atlantic and RSFO traditions. He suggests that the evident wealth of such sites relates to their role in controlling the production and circulation of bronze objects and other prestige goods in this zone. For the Fort Harrouard finds, see Mohen and Bailloud (1987) and Harding (2000).
39. The first rampart at Saxon-Sion dates to Bronze Final IIIb or the start of Hallstatt C (Legendre and Olivier 2003, 55). A later rebuilding on a more massive scale is radiocarbon dated either to Hallstatt C or – more probably – to the Hallstatt D–La Tène A transition, since the same type of construction is known at Messein, where it dates to the sixth century BC.
40. On the basis of the 1999 evaluation, the remains appear to extend over an area of 3 ha on the banks of the Seine, but there is as yet no indication of whether the settlement was ever enclosed. The nature of the deposits points to intensive occupation over a period of some centuries at the very start of the Iron Age.
41. At Wallendorf, the settlement covered an area of at least 15 ha. The

site was fortified for the first time in the fifth century BC. To judge from the finds, which belong to the La Tène A–B transition or to La Tène B1, and an extensive series of radiocarbon dates, the site was intensively occupied for a relatively short period centred on the first half of the fourth century BC (Krausse 2003, 153–62). At the Titelberg, the first two ramparts are attributed to the Early La Tène period on the basis of a scatter of finds of this date, but the nature of activity is unclear; Metzler *et al.* (2006) suggest the site was a ceremonial centre and/or place of assembly for a dispersed population.

42. For *Fürstensitze*, see e.g. Diepeveen-Jansen 2001.

43. As Diepeveen-Jansen notes (2001, 66), it is often unclear whether the defences and internal structures at sites like Aleburg are contemporary. As at Choisy-au-Bac and several sites in the middle Rhine-Moselle region, the Aleburg defences were eventually destroyed by fire.

44. In a recent analysis of the pottery from the Cité d’Affrique, Tikonoff and Deffressigne-Tikonoff (2003) found no support for the earlier suggestion by Lagadec *et al.* (1989), based on the metalwork, of a hiatus in activity during La Tène A, concluding that the hillfort was in continuous use from Hallstatt D2–D3 to the start of La Tène B1.

45. At the nearby Saxon-Sion, the second rampart probably dates to the end of Hallstatt D2–D3 (note 39 above). A fair amount of later sixth century BC pottery has been found on the site, but only a scatter of Early La Tène material, although Legendre and Olivier (2003, 61) contend that this may be because deposits were destroyed by later occupation. For possible contenders as hillforts occupied at this period in Meuse, see Provost and Mourot (2002).

46. Some of the enclosures that seem to stand in isolation may in fact be linked to settlements in the vicinity. Beaurieux is only a few hundred metres from another *EIA1* site at Cuiry-lès-Chaudardes, Les Fontinettes/Champ Tortu – which itself has a series of palisades, although these do not appear to form an enclosure (Demoule and Ilett 1982, fig. 1) – whilst Bucy-le-Long appears to be contemporary with the nearby settlements at Le Grand Marais (Pommeputy and Brun 1982) and Le Chemin de Venizel (Auxiette *et al.* 1995; 1996).

47. The site is overlain by Later Iron Age and Roman settlements (Haselgrove 1996). Fieldwalking revealed a spread of *EIA1* pottery over the enclosure, implying that deposits had been lost to ploughing. At two sigma, the five infant burials give a combined radiocarbon date of 810–760 cal. BC (0.91), 680–660 cal. BC (0.07) and 620–600 cal. BC (0.02). The date of the extension is less certain, but the pot from the Phase 2 entrance has a TL date centred on 545 BC (*ibid.*, 155), whilst a

Hallstatt D2–D3 brooch was found in a nearby Roman ditch and might be residual from this phase.

48. See Figure 3. The palisades on either side of the Pont-de-Metz building do not definitely form an enclosure, nor are they definitely contemporary (Lemaire and Buchez 2001); they might instead be boundaries pre- or post-dating the settlement.

49. See note 22.

50. See Figure 3. Not enough survives of the palisade and entrance (Fig. 7) to be sure whether the Bucy building is inside or outside the enclosure, always assuming they were contemporary.

51. Gouge and Mordant (1992) use the term 'résidence latifundaire' of Grisy-sur-Seine.

52. The settlement occupies a low hill overlooking the Seine and has yielded quantities of painted pottery in a style compared by Villes (1999) to Vix or Bragny-sur-Saône (Doubs) in Burgundy.

53. Only half a dozen silos are attributed to La Tène B. This compares with c. 40 dated to Hallstatt D2–D3/La Tène A and ten to Hallstatt C–D1. Another 40 are undated. It is unclear how much an assumption of continuity between the enclosures has influenced the dating. Occupation continued into La Tène D and the site is overlain by a major early medieval settlement (Villes 1991, 85–9), further complicating its interpretation.

54. The lower fills of the ditch yielded little material, but it is thought to be contemporary with other features within and without the enclosure, including chalk pits, 4-posters and silos. The top fill contained early Gallo-Roman material and there was a large rectangular building of this date just outside the north-eastern corner.

55. The ditch at Villeneuve is 5–6 m wide and is up to 1.9 m deep on the south-east side, but only 0.2–0.8 m on the north-east. The Bucy ditch is less than 1 m wide by 0.35 m deep, but an additional 70 cm was removed in stripping, for which allowance must be made (Debord and Desenne 2005, 165). From the air photographs, Villeneuve has sides 130 m long, Bucy nearer 140 m, giving both sites an internal area close to 2 ha, nearly double the Champagne sites.

56. Villes (1999, 19) draws attention to two unexcavated promontory enclosures on the western edge of the Argonne south of Viennela-Ville, which may be related. One of them, at Verrières, has an associated tumulus cemetery, just like that at Haulzy; the other, at Sainte-Menehould, was destroyed in 1971 when the A4 was built.

57. Diepeveen-Jansen's (2001, 63–4) observation that the earlier hillforts were on average smaller than the later ones needs to be

qualified. Her values of 3.7 ha and 7 ha respectively do not take account of large hillforts like the Titelberg and Wallendorf, which we now know were occupied in La Tène A, but not reoccupied until La Tène D. When these are included, the difference disappears. The earlier group does, however, include more very small sites: four <1 ha in extent and five <3 ha, as opposed to only three between 1–3 ha in the second group.

58. The enclosure on Le Mont de Maisses could conceivably be a cult area for the nearby open settlement at Bussy-Lettrée, Le Petit Vau Boudin (Violot 2000). The latter – with Saint-Gibrien – is one of very few sites in Champagne definitely occupied during La Tène B2–C1.

59. As the rubbish dumps were not associated with the primary use of the enclosure, an alternative hypothesis is put forward that the site was used seasonally in connection with the movement of stock; traces of cattle trampling were found in the north-west corner (Bourgeois *et al.* 2003, 226).

60. Mathiot (2004) suggests that this enclosure complex deliberately referenced a Bronze Age burial mound to legitimate the inhabitants' claim to the site.

61. At the ZAC A26–A29 at Saint-Quentin, an enclosed settlement was built in La Tène C1 over part of the former open settlement (Pichon 2002, 397–8), but the excavations are unpublished and it is not clear whether occupation was continuous. The open settlement is dated to the later fourth century BC (La Tène B1– B2).

62. But see note 53. Another case of possible continuity is Tournedos-sur-Seine (Eure). The main settlement area there was inhabited at some stage in both *EIA1* and *EIA2* (as well as in La Tène D); nearby was an inhumation cemetery founded in La Tène B and, higher up the terrace, a series of enclosures used for agriculture and – from La Tène C2 – for settlement (Carré 1993).

63. See above and note 58.

64. Even if La Tène B2–C1 settlements took on a very different character, so much of the valley bottom has been excavated that if there were settlements there at this period, they would have surely by now have been found.

65. In the Aisne valley it seems likely that during La Tène B, settlement retreated to the lower slopes and side valleys (where the modern villages are), remaining there throughout the third century BC (Haselgrove 2007). If similar displacements occurred elsewhere, they may have been of shorter duration, since La Tène C1 settlements are not uncommon in neighbouring regions, including the Oise valley.

Bibliography

- Audouze, F. and Buchsenschutz, O. 1988. *Architectures des Âges des Métaux: Fouilles Récentes*. Paris: Dossiers de Protohistoire 2.
- Auxiette, G. 1997. La faune des établissements ruraux du Bronze final au Hallstatt final/La Tène ancienne dans la vallée de l'Aisne, *Revue Archéologique de Picardie* 1997 3/4, 29–71.
- Auxiette, G. and Malrain, F. 2005. *Hommages à Claudine Pommepuy*. Amiens: Revue Archéologique de Picardie Numéro Spécial 22.
- Auxiette, G. and Méniel, P. 2005. L'Étude de faunes de la protohistoire ancienne, *Revue Archéologique de Picardie* 2005 3/4, 121–126.
- Auxiette, G., Boulén, M., Desenne, S., Matteredne, V. *et al.* 2003. Un site du Hallstatt à Villeneuve-Saint-Germain "Les Étomelles", *Revue Archéologique de Picardie* 2003 3/4, 21–65.
- Auxiette, G., Brun, P., Gransar, F., Hénon, B. *et al.* 1994. Bucy-le-Long "Le Grand Marais" (Aisne), *Fouilles Protohistoriques de la Vallée de l'Aisne* 22, 163–194.
- Auxiette, G., Desenne, S., Gransar, F., Gransar, M. *et al.* 1995. Le site du début du second âge de Fer de Bucy-le-Long "Le Fond du Petit Marais" et "Le Chemin de Venizel", *Fouilles Protohistoriques de la Vallée de l'Aisne* 23, 235–276.
- Auxiette, G., Hénon, B., Desenne, S., Gransar, F. *et al.* 1996. Le site du début du second âge de Fer de Bucy-le-Long "Le Fond du Petit Marais" et "Le Chemin de Venizel", in *Sauvetage Archéologique de la Vallée de l'Aisne* 1996, 73–113. Amiens: Service Regional d'Archéologie.
- Auxiette, G., Robert, B. and Hénon, B. 1995. Le site de Limé "Les Sables Sud": l'occupation de La Tène, *Fouilles Protohistoriques de la Vallée de l'Aisne* 23, 277–297.
- Baray, L. 2004. *Pratiques funéraires et Sociétés de l'âge du Fer dans le Bassin Parisien*. Paris: Gallia Supplément 56.
- Barbet, P. and Buchez, N. 2005. Les habitats protohistoriques de Ham "Le Bois à Cailloux", *Revue Archéologique de Picardie* 2005 1/2, 5–50.
- Bardel, D. 2005. Le mobilier archéologique de l'habitat du Hallstatt final à Ecuelles-Char moy (Seine-et-Marne), in Buchsenschutz *et al.* 2005, 209–224.
- Bayard, D. 1989. Vestiges d'un village gaulois établi au bord de l'Aisne au "Gué de Mauchamp" à Juvin court-et-Damary, in *Archéologie: grands travaux en Picardie: Autoroute A26*, 96–97. Amiens: Revue Archéologique de Picardie.
- Billoin, D., Matteredne, V. and Méniel, P. 2002. L'habitat de La Tène ancienne de Tagnon "La Fricassée" (Ardennes), économie et vaisselier, in Méniel and Lambot 2002, 33–48.

- Blanchet, J.-C. 1984. *Les premiers métallurgistes en Picardie et dans le nord de la France*. Paris: Mémoires de la Société Préhistorique Française 17.
- Blanchet, J.-C. and Talon, M. 1987. L'éperon barré du "Camp César" à Catenoy (Oise), à l'âge du Bronze final, in *Les relations entre le continent et les îles Britanniques à l'âge du Bronze (Actes du colloque de Lille)*, 189–210. Amiens: Supplément à Revue Archéologique de Picardie.
- Blancquaert, G. and Desfossés, Y. 1994. Les établissements ruraux de l'âge du Fer sur le tracé de l'autoroute A29 (Le Havre–Yvetot), in Buchsenschutz and Ménériel 1994, 227–254.
- Blancquaert, G. Clavel, V. Desoutter, S. and Henton, A. 2003. Dourges "Le Marais de Dourges": présentation préliminaire d'une fouille préventive – site LA1 – sur la plate-forme multimodale Delta 3, *Bulletin de l'Association Française pour l'Etude de l'Age du Fer* 21, 5–7.
- Blouet, M.V. 1999. Aérodrome Régional Metz-Nancy, *Gallia Informations* 1992–2, 99–104.
- Bonenfant, P.-P. 1990. Hastedon (Namur), grande fortification du début de La Tène (474–450 av. J.-C.), in, *Les Celtes en France du Nord et en Belgique VIe–Ier siècle avant J.-C.*, 81–85. Valenciennes: Musée des Beaux Arts.
- Bosquet, D. and Preud'homme, D. 2000. Découverte d'une enceinte laténienne à Hannut, au lieu-dit Trommelveld, *Revue Archéologique de Picardie* 2000 1/2, 13–22.
- Boulenger, L. 2005. Occupations du premier et du second âge du Fer sur le plateau de Sénart (Seine-et-Marne). Cadre et données récentes sur la commune de Lieusaint, in Buchsenschutz *et al.* 2005, 127–144.
- Bourgeois, J. and Verlaeckaert, K. 2001. The Bronze Age and Early Iron Age in western Flanders (Belgium): shifting occupation patterns, in M. Lodewijckx (ed.), *Belgian Archaeology in a European Setting II*, 13–24. Leuven: Acta Archaeologica Lovaniensia Monographiae 13.
- Bourgeois, J., Bourgeois, I. and Cherretté, B. (eds) 2003. *Bronze Age and Iron Age Communities in North-Western Europe*. Brussels: Koninklijke Vlaamse Academie van België.
- Bourgeois, J., Cherretté, B. and Bourgeois, I. 2003. Bronze Age and Iron Age settlements in Belgium: an overview, in Bourgeois *et al.* 2003, 175–297.
- Braemer, F., Cleuziou, S. and Coudart, A. (eds) 1999. *Habitat et Société (XIXe Rencontres Internationales d'Archéologie et d'Histoire d'Antibes)*. Antibes: Editions APDCA.
- Bretagne, P. (ed.) 1998. Onnaing, L'opération Toyota, *Bilan Scientifique Nord-Pas-de-Calais* 1998, 71–100.
- Bretz-Mahler, D. 1971. *La civilisation de La Tène I en Champagne*. Paris: Gallia Supplément 23.

- Brun, P. 1986. *La civilisation des Champs d'Urnes*. Paris: Documents d'Archéologie Française 4.
- Brun, P. 1993. East-west relations in the Paris Basin during the Late Bronze Age, in C. Scarre and F. Healey (eds), *Trade and Exchange in Prehistoric Europe*, 171–182. Oxbow: Oxbow Monograph 33.
- Brun, P. and Mordant, C. (eds) 1988. *Le groupe Rhin-Suisse-France orientale et la notion de Civilisation des Champs des Urnes (Actes du Colloque International de Nemours 1986)*. Nemours: Mémoires du Musée de Préhistoire de l'Ile-de-France 1.
- Brun, P. and Pion, P. 1992. L'organisation de l'espace dans la vallée de l'Aisne pendant l'âge du Bronze, in Mordant and Richard 1992, 117–127.
- Brun, P. and Pommepuy, C. 1983. Le site du premier âge du Fer de Bucy-le-Long "Le Grand Marais", *Fouilles Protohistoriques de la Vallée de l'Aisne* 11, 171–204.
- Brun, P. and Pommepuy, C. 1988. Les structures bâties du site de Bucy-le-Long, in Audouze and Buchsenschutz 1988, 67–70.
- Brun, P., Buchez, N., Gaudefroy, S. and Talon, M. 2005. La protohistoire ancienne, *Revue Archéologique de Picardie* 2005 3/4, 99–120.
- Buchez, N., Gransar, F., Matterné, V., Pernaud, J.-M. and Yvinec, J.-H. 2001. L'habitat de La Tène ancienne sur la ZAC centre-ville de Bussy-Saint-Georges (Seine-et-Marne) – 1re partie, *Revue Archéologique du Centre de la France* 40, 27–67.
- Buchez, N., Gransar, F., Matterné, V., Pernaud, J.-M. and Yvinec, J.-H. 2002. L'habitat de La Tène ancienne sur la ZAC centre-ville de Bussy-Saint-Georges (Seine-et-Marne) – 2e partie, *Revue Archéologique du Centre de la France* 41, 35–55.
- Buchsenschutz, O. and Méniel, P. 1994. *Les installations agricoles de l'Âge du Fer en Ile-de-France*. Paris: Études d'Histoire et d'Archéologie 4.
- Buchsenschutz, O., Bulard, A. and Lejars, T. (eds) 2005. *L'âge du fer en Ile-de-France (Actes du XXVI Colloque de l'AFEAF, Paris et Saint-Denis 2002)*. Paris: *Revue Archéologique du Centre de la France* supplément 26.
- Bulard, A., Desgros, J., Druhot, C. and Tarreté, J. 1992. La Grande Paroisse, Seine-et-Marne: occupations protohistoriques en rive gauche de Seine, in Mordant and Richard 1992, 129–132.
- Bulard, A. and Peake, R. 2005. Autour du confluent Seine-Yonne aux IXe–VIe siècles: tendances évolutives des céramiques et chronologie, in Buchsenschutz et al. 2005, 225–240.
- Buzzi, P. 1995. Woippy "Le Poillieu", *Bilan Scientifique Lorraine* 1995, 100–102.
- Carré, F. 1993. Deux habitats et une nécropole à Tournedos-sur-Seine: premiers résultats, in D. Cliquet, M. Remy-Watte, V. Guichard and M.

- Vaginay (eds), *Les Celtes en Normandie: Les rites funéraires en Gaule, IIIème-Ier siècle avant J.-C. (Actes du XIVème colloque de l'AFEAF, Evreux 1990)*, 55–76. Rennes: Revue Archéologique de l'Ouest Supplément 6.
- Chartier, M., Dubouloz, J., Hachem, L., Pion, P. and Robert, B. 1992. Berry-au-Bac “Le Vieux Tordoir”, “La Culée”, *Les Fouilles Protohistoriques de la Vallée de l'Aisne. Rapport de fouilles des sites de la convention 1992*, 35–50. Amiens: Service Régional d'Archéologie.
- Chossenot, M. 1997. *Recherches sur La Tène moyenne et finale en Champagne. Étude des processus de changement*. Reims: Mémoire de la Société Archéologique Champenoise 12.
- Colin, A. 2000. Les habitats ruraux de l'âge du Fer en Picardie nordoccidentale, d'après les fouilles de l'autoroute A16, in Marion and Blancquaert 2000, 445–462.
- Constantin, C. and Demoule, J. 1983. Le site chalcolithique de Bourget-Comin “La Montagne de Comin”, *Fouilles Protohistoriques de la Vallée de l'Aisne* 11, 137–162.
- Copret, D. 1995. Rosnay-L'Hôpital “La Remise” et “Les Grandes Pâtures”, *Bilan Scientifique Champagne-Ardenne 1995*, 48–49.
- Coudart, A., Dubouloz J. and Le Bolloch, M. 1981. Un habitat de la Tène Ancienne dans la vallée de l'Aisne à Menneville (Aisne), in *L'Âge du Fer en France septentrionale*, 121–130. Reims: Mémoire de la Société Archéologique Champenoise 2.
- Debord, J. 1981. Un enclos quadrangulaire à remplissage de La Tène 1a, sis à Villeneuve-Saint-Germain (Aisne), in *L'Âge du Fer en France septentrionale*, 107–120. Reims: Mémoire de la Société Archéologique Champenoise 2.
- Debord, J. and Desenne, S. 2005. Bucy-le-Long, “La Grande Pièce de la Croix Rouge” (Aisne). Découverte d'un ensemble caractéristique du début de La Tène ancienne, in Auxiette and Malrain 2005, 163–174.
- Déchelette, J. 1927. *Manuel d'Archéologie Préhistorique, Celtique et Gallo-Romaine, IV: Second Age du Fer ou Époque de La Tène* (2nd edn). Paris: Picard.
- Dechezleprêtre, T., Cousyn, P., Léon, G., Paez-Rezende, L. and Rougier, R. 2000. Architecture des bâtiments de l'âge du fer en Haute-Normandie, in Marion and Blancquaert 2000, 321–338.
- Deffressigne, S., Rolin, D. and Villes, A. 1995. Habitats Bronze final IIIb–Hallstatt ancien, in *Fastes des Celtes Anciens*, 116–120. Troyes: Éditions des Musées de Troyes et Nogent-sur-Seine. Deffressigne, S., Tikonoff, N., Boulanger-Bouchet, K., Chausse, C. and Tessier-Hermentey, C. 2002. Les gisements d'habitat de la fin du premier âge du fer à Gondreville-Fontenoy-sur-Moselle (54), *Archaeologia Mosellana* 4, 81–184.
- De Labriffe, P.-A. and Sidera, I. 1987. Les habitats de l'Âge du fer de Condé-

sur-Suippe “Le Déprofundis”, *Fouilles Protohistoriques de la Vallée de l’Aisne* 15, 185–233.

Delattre, V. 2000. Les inhumations en silos dans les habitats de l’âge du Fer du Bassin parisien, in Marion and Blancquaert 2000, 200– 311.

Demoule, J.-P. 1997. De la périphérie au centre: la culture Aisne– Marne, in P. Brun and B. Chaume (eds), *Vix et les éphémères principautés celtiques. Les VIe-Ve siècles avant J.-C. en Europe centreoccidentale*, 303–314. Paris: Éditions Errance.

Demoule, J.-P. 1999. *Chronologie et société dans les nécropoles celtiques de la culture Aisne–Marne, du VIe au IIIe siècle avant notre ère*. Amiens: Revue Archéologique de Picardie Numéro Spécial 15.

Demoule, J.-P. and Ilett, M. 1982. Les installations du premier Âge du Fer à Cuiry-les-Chaudardes, in *Vallée de l’Aisne: Cinq Années de Fouilles Protohistoriques*, 187–193. Amiens: Revue Archéologique de Picardie Numéro Spécial.

Desbrosses, V. 2005. Deux sites de stockage à Bazancourt-Pomacle en Champagne Crayeuse, *Bulletin de l’Association Française pour l’Etude de l’Age du Fer* 23, 13–14.

Desfossés, Y. (ed.) 2000. *Archéologie préventive en vallée de Canche. Les sites protohistoriques fouillés dans le cadre de la réalisation de l’autoroute A16*. Berck-sur-Mer: Nord Ouest Archéologie 11. Diepeveen-Jansen, M. 2001. *People, Ideas and Goods*. Amsterdam: Amsterdam Archaeological Studies 7.

Dugois, F. 1992. Isles-sur-Suippe “Les Fontaines”, *Bilan Scientifique Champagne-Ardenne* 1991, 67–69.

Dugois, F. and Villes, A. 1995. Nogent-sur-Seine “Les Guignons” (Aube), *Bilan Scientifique Champagne-Ardenne* 1995, 31–32.

Durand, J.-C. 1994. Un habitat de La Tène ancienne à Champagne-sur-Oise, in Buchsenschutz and Méniel 1994, 149–158.

Durost, R. 2001. Saint-Germain-La-Ville “Le Bas de la Voie Priée”, *Bilan Scientifique Champagne-Ardenne* 2001, 109–113.

Durvin, P. and Brunaux, J.-L. 1983. Le matériel protohistorique de Thiverny (Oise), in *Les Celtes dans le nord du bassin Parisien*, 96–126. Amiens: Revue Archéologique de Picardie 1983 1.

Fechner, K. Decocq, O. and Deligne, F. 2001. Étude pédologique sur le tracé du TGV Est, *Bilan Scientifique Champagne-Ardenne* 2001, 139–140.

Feray, P. 2001. Auve “La Vigne”, *Bilan Scientifique Champagne-Ardenne* 2001, 139–140.

Field, N. and Parker Pearson, M. 2003. *Fiskerton: An Iron Age Timber Causeway with Iron Age and Roman Votive Offerings*. Oxford: Oxbow Books.

- Flotté, D. 2001. Saint-Hilaire-au-Temple "Le Raidon", *Bilan Scientifique Champagne-Ardenne 2001*, 161–164.
- Frangin, E. 2001. Sivry-Anté "La Queue des Yvarts", *Bilan Scientifique Champagne-Ardenne 2001*, 169–171.
- Freidin, N. 1982. *The Early Iron Age in the Paris Basin*. Oxford: British Archaeological Reports International Series 131.
- Friboulet, M. 2000. Oger "Midoin", *Bilan Scientifique Champagne-Ardenne 2000*, 112–113.
- Gerritsen, F.A. 2003. *Local Identities: Landscape and Community in the Late Prehistoric Meuse–Demer–Scheldt Region*. Amsterdam: Amsterdam Archaeological Studies 9.
- Gascó, J. 1996. Chronologie de l'âge du Bronze et du premier âge du Fer de la France continentale, in K. Randsborg (ed.), *Absolute Chronology: Archaeological Europe 2500–500 BC*, 227–250. Copenhagen: Acta Archaeologica 67.
- Gaudefroy, S. 1995. Longueil-Sainte-Marie, L'Orméon III. Bilan de fouilles de 1995, in *Rapport d'activité 1995 du Programme de Surveillance et d'Étude Archéologique des Sablières de la moyenne vallée de l'Oise*, 202–257. Amiens: Service Régional d'Archéologie.
- Gaudefroy, S. 1996. *Un ensemble de caves Laténiennes à Pontpoint, Le Fond de Rambourg, Rapport d'activité 1996 du Programme de Surveillance et d'Étude Archéologique des Sablières de la moyenne vallée de l'Oise*. Amiens: Service Régional d'Archéologie.
- Gaudefroy, S. 1999. Glisy "Terre de Ville". *Document Final de Synthèse*. Amiens: Service Régional d'Archéologie.
- Gaudefroy, S. 2000. La Croix-Saint-Ouen "Le Pré des Isles", *Bilan Scientifique Picardie 2000*, 23–24.
- Gouge, P. and Mordant, C. 1992. Une résidence latifundaire du Hallstatt final à Grisy-sur-Seine "La Ferme d'Isle", *Bulletin du Groupement Archéologique de Seine-et-Marne* 31, 65–73.
- Gouge, P. and Séguier, J.-M. 1994. L'habitat rural de l'âge du Fer en Bassée et à la confluence Seine-Yonne (Seine-et-Marne), in Buchsensschutz and Méniel 1994, 45–69.
- Gouge, P. and Leconte, L. 1999. L'habitat du Hallstatt final et de La Tène ancienne sur le territoire de la "Ferme d'Isle" à Grisy-sur-Seine (Seine-et-Marne): propositions pour une cadre chronologique, in Villes and Bataille-Melkon 1999, 157–180.
- Gransar, F. 2000. Le stockage alimentaire sur l'établissements ruraux de l'âge du fer en France septentrionale: complémentarité des structures et tendances évolutives, in Marion and Blancquaert 2000, 277–298.
- Gransar, F. 2001. Ciry-Salsogne "La Bouche à Vesle", *Bilan Scientifique Picardie 2001*, 23–24.

- Gransar, F. 2002a. Ploisy, Le Bras de Fer – Zones 2, 4, 8 et 9, *Bilan Scientifique Picardie 2002*, 41.
- Gransar, F. 2002b. *Le stockage alimentaire à l'âge du Fer en Europe tempérée*. Unpublished Ph.D. thesis, University of Paris I.
- Gransar, F. 2002c. La batterie de silos de Soupir “Le Champ Grand Jacques” (Aisne): contribution à l'identification d'une centralisation du stockage à La Tène B dans le nord de la France, in Méniel and Lambot 2002, 67–80.
- Gransar, F., Auxiette, G., Desenne, S., Hénon, B. *et al.* 1999. Essai de modélisation de l'organisation de l'habitat au cours des cinq derniers siècles avant notre ère dans la vallée de l'Aisne, in Braemer *et al.* 1999, 419–438.
- Hamm, G. 2004. *Carte Archéologique de la Gaule: La Meurthe-et-Moselle (54)*. Paris: Académie des Inscriptions et Belles Lettres.
- Harding, A.F. 2000. *European Societies in the Bronze Age*. Cambridge: Cambridge University Press.
- Haselgrove, C. 1996. Roman impact on rural settlement and society in southern Picardy, in N. Roymans (ed.), *From the Sword to the Plough: Three Studies on the Earliest Romanization of Northern Gaul*, 127–187. Amsterdam: Amsterdam Archaeological Studies 1.
- Haselgrove, C. 2007. The age of enclosure: Later Iron Age settlement and society in northern France, in C. Haselgrove and T. Moore (eds), *The Later Iron Age in Britain and Beyond*, 492–522. Oxford, Oxbow Books.
- Haselgrove, C. and Lowther, P. forthcoming. *Les habitats protohistoriques et gallo-romains de Beaurieux “Les Grèves” (Aisne)*. Amiens: Revue Archéologique de Picardie Numéro Spécial.
- Hatt, J.-J. and Roualet, P. 1977. La chronologie de La Tène en Champagne, *Revue Archéologique de l'Est et Centre-Est* 28, 7–36.
- Hénon, B. 1997. Limé “Les Grands Aulnes”, *Les Fouilles Protohistoriques de la Vallée de l'Aisne. Rapport de fouilles des sites de la convention 1997*, 31–49. Amiens: Service Régional d'Archéologie.
- Hénon, B. 1998. Limé “La Fosse aux Chevaux”, *Sauvetage Archéologique dans la Vallée de l'Aisne 1998. Rapport de fouilles des sites de la convention 1999*, 67–120. Amiens: Service Régional d'Archéologie.
- Hénon, B. 2001. Villeneuve-Saint-Germain, Les Étomelles, *Bilan Scientifique Picardie 2001*, 51–52.
- Hénon, B., Auxiette, G., Boulén, M., Chartier, M. *et al.* 1996. Limé “La Prairie”, *Sauvetage Archéologique de la Vallée de l'Aisne 1996*, 115–147. Amiens: Service Régional d'Archéologie.
- Hénon, B., Auxiette, G., Boulén, M., Desenne, S. *et al.* 2002. Trois nouveaux sites d'habitat du Hallstatt final/La Tène ancienne dans la vallée de l'Aisne, in Méniel and Lambot 2002, 49–66.

- Hill, J.D. 1999. Settlement, landscape and regionality. Norfolk and Suffolk in the pre-Roman Iron Age of Britain and beyond, in J.A. Davies and T. Williamson (eds), *The Land of the Icen: the Iron Age in Northern East Anglia*, 185–207. Norwich: Studies in East Anglia History 4.
- Hurtrelle, J., Monchy, E., Roger, F., Rossignol, P. and Villes, A. 1990. *Les débuts du second âge du Fer dans le nord de la France*. Arras: Les Dossiers de Gauheria 1.
- Ilett, M. and Gransar, F. 1999. *La batterie de silos de La Tène B à Cuiry-lès-Chaudardes*. Amiens: Service Régional d'Archéologie.
- Jacques, A. and Rossignol, P. 1996. La céramique laténienne en Artois: premiers résultats des fouilles des années 1990–1995, *Revue Archéologique de Picardie* 1996 3/4, 23–39.
- Jacques, A. and Rossignol, P. 2001. La ferme indigène d'Arras, "Les Bonnettes" (Pas-de-Calais), in J.R. Collis (ed.), *Society and Settlement in Iron Age Europe (Actes du XVIIIe Colloque de l'AFEAF, Winchester)*, 246–261. Sheffield: Sheffield Academic Press.
- Jahier, I., Besnard-Vauterin, C., Lepaumier, H., Paris, P. et al. 2000. Les bâtiments des habitats de l'âge du fer en Basse-Normandie: panorama des découvertes, in Marion and Blancquaert 2000, 339–357.
- Klag, T. 2000. Jouy-aux-Arches "Lotissement Maisonneraie des Arches 3", *Bilan Scientifique Lorraine* 2000, 80–82.
- Koehler, A. 1994. Rosnay-l'Hôpital "La Remise" et "Les Grandes Pâtures", *Bilan Scientifique Champagne-Ardenne* 1994, 37–39.
- Koenig, M.-P. 1999. Rosières-aux-Salines "Zone industrielle des Sables", *Bilan Scientifique Lorraine* 1999, 24–25.
- Krausse, D. 2003. Cultural change and settlement development in the "Arduenna Silva" from 600 to 50 BC, in Bourgeois et al. 2003, 151–173.
- Krzyzanowski, J. and Lepage, L. 1993. Une fosse de la transition Hallstatt/La Tène à Trémont-sur-Saulx "La Garenne" (Meuse), *Archaeologia Mosellana* 2, 269–293.
- Lagadec, J.-P., Duval, P., Eveillard, J., Leroy, M. and Ploquin, A. 1989. Bilan de sept campagnes de fouilles à la cité d'Afrique de Messein, *Revue Archéologique de l'Est et Centre-Est* 40, 147–197.
- Lagadec, J.-P., Duval, P., Eveillard, J., Leroy, M. and Ploquin, A. 1993. La cité d'Afrique, habitat fortifié du premier âge du fer: l'apport de nouvelles fouilles, *Archaeologia Mosellana* 2, 149–173.
- Lambot, B. 1978. Nanteuil-sur-Aisne, un site du Bronze Final dans le sud Ardennais, *Bulletin de la Société Archéologique Champenoise* 4, 17–54.
- Lambot, B. 1988. L'habitat protohistorique du "Fond Pernant" à Compiègne, in Audouze and Buchsenschutz 1988, 23–37.
- Lambot, B. 1989a. Le Bronze final et le premier âge du fer sur le site d'Acy-

- Romance (Ardennes), *Gallia Préhistoire* 31, 209–258.
- Lambot, B. 1989b Les sanctuaires du Bronze final et premier âge du fer en France septentrionale, in Ulrix-Closset and Otte 1989, 201– 273.
- Lambot, B. 1991. Le “Fond Pernant” à Compiègne: habitat de La Tène ancienne, in *Archéologie de la Vallée de l’ Oise*, 110–112. Compiègne: Centre de Recherche Archéologique de la Vallée de l’Oise.
- Lanting, J.N. and Van der Plicht, J. 2001–2. De ¹⁴C-chronologie van der Nederlandse pre- en protohistorie, IV: bronstijd en vroege ijzertijd, *Palaeohistoria* 43–4, 117–262.
- Laurelut, C. and Louwagie, G. 2002. Défrichements et mises en culture d’un secteur marginal à l’âge du Fer: la côte oxfordienne entre Poix-Terron et Villers-le-Tourneur sur le tracé de l’A34 (Ardennes), in Méniel and Lambot 2002, 9–14.
- Legendre, J.-P. and Olivier, L. 2003. L’*oppidum* de Sion: état des connaissances et contexte régional, *Archaeologia Mosellana* 5, 53–76.
- Le Bolloch, M. and Farruggia, J.-P. 1983. Le site néolithique, chalcolithique et de l’âge du Fer de Maizy, Les Grands Aisements, *Fouilles Protohistoriques de la Vallée de l’Aisne* 11, 93–136.
- Le Guen, P. 2005. Apport récent sur la transition âge du Bronze-âge du Fer dans la vallée de l’Aisne, Osly-Courtil “La Terre Saint-Mard” (Aisne). Processus de différenciation de l’habitat au cours du Bronze Final, in Auxiette and Malrain 2005, 141–156.
- Lemaire, F. and Buchez, N. 2001. L’ habitat du premier âge du fer de Pont-de-Metz “Le Champs aux Oisons” (Somme), *Revue Archéologique de Picardie* 2004 3/4, 105–120.
- Magny, M. 1995. *Une histoire du climat. Des derniers mammouths au siècle de l’automobile*. Paris: Éditions Errance.
- Malrain, F. 2003. Venette “Le Bois de Plaisance”, *Bilan Scientifique Picardie* 2003, 89.
- Malrain, F. and Pinard, E. 1996. Pontpoint “Les Prés Very II et III, *Rapport d’activité 1995 du Programme de Surveillance et d’Étude Archéologique des Sablières de la moyenne vallée de l’Oise*, 316–364. Amiens: Service Régional d’Archéologie.
- Malrain, F., Gaudefroy, S., Gransar, F., Auxiette, G. and Méniel, P. 2005. La protohistoire récente, *Revue Archéologique de Picardie* 2005 3/4, 127–176.
- Malrain, F., Pinard, E. and Gaudefroy, S. 1996. Contribution à la mise en place d’une chronologie du second l’âge du Fer dans le département de l’Oise, *Revue Archéologique de Picardie* 1996 3/4, 41– 70.
- Malrain, F., Matterne, V., Méniel, P. and Pinard, E. 2005. D’intérêt des grands décapages. Les fermes des VI^e et Ve siècles avant notre ère de Verberie (Oise), in Auxiette and Malrain 2005, 175–182.

- Marion, S. 2004. *Recherches sur l'âge du fer en Ile-de-France*. Oxford: British Archaeological Reports International Series 1231.
- Marion, S. and Blancquaert, G. (eds) 2000. *Les installations agricoles de l'Âge du Fer en France septentrionale*. Paris: Études d'Histoire et d'Archéologie 6.
- Mathiot, D. 2004. Contribution à la connaissance des établissements ruraux Laténiens: implantation et organisation des installations agricoles du Nord-Pas-de-Calais (Ve-Ier s. av J.-C.), *Bulletin de l'Association Française pour l'Etude de l'Age du Fer* 22, 33–35.
- Matterne, V. 2001. *Agriculture et alimentation végétale durant l'âge du fer et l'époque gallo-romaine en France septentrionale*. Montagnac: Archéologie des Plantes et des Animaux 1.
- Méniel, P. 2001. *Les gaulois et les animaux: Élevage, repas et sacrifice*. Paris: Éditions Errance.
- Méniel, P. and Lambot, B. 2002. *Repas des vivants et nourriture pour les morts en Gaule (Actes du XXVe colloque de l'AFEAF, Charleville-Mézières 2001)*. Reims: Mémoire de la Société Archéologique Champenoise 16.
- Metzler, J., Méniel, P. and Gaeng, C. 2006. Oppida et espaces publics, in C. Haselgrove (ed.), *Les mutations de la fin de l'âge du Fer*, 201–224. Glux-en-Glenne: Collection Bibracte 12/4.
- Milcent, P.-Y. 2004. *Le premier âge du Fer en France centrale*. Paris: Société Préhistorique Française Mémoire 34.
- Millerat, P. and Buchez, N. 2002. Thieulloy-l'Abbaye “Les Terres à Douze-Le Buquet au Chemin des Charbonniers”, *Bilan Scientifique Picardie* 2002, 127.
- Mohen, J.-P. and Bailloud, G. 1987. *La vie quotidienne. Les fouilles du Fort-Harrouard*. Paris: L'Âge du Bronze en France 4.
- Mordant, C. and Gouge, P. 1992. L'occupation du sol au Bronze final dans les vallées de l'Yonne et de la Haute-Seine, in Mordant and Richard 1992, 133–164.
- Mordant, C. and Richard, A. (eds) 1992. *L'habitat et l'occupation du sol à l'âge du Bronze en Europe*. Paris: Documents Préhistoriques 4.
- Moreau, C. 2001. Bouy “Le Haut Buisson”, *Bilan Scientifique Champagne-Ardenne* 2001, 143–145.
- Naze, Y. 1993. Tergnier, Les Hauts du Riez (Aisne): habitats de l'âge du fer et de la période gallo-romaine, *Revue Archéologique de Picardie* 1993 1/2, 3–33.
- Needham, S., Ramsey, C.B., Coombs, D., Cartwright, C. and Pettitt, P. 1997. An independent chronology for British Bronze Age metalwork: the results of the Oxford Radiocarbon Accelerator programme, *Archaeological Journal* 154, 55–107.

- O'Connor, B. 1980. *Cross-Channel Relations in the Later Bronze Age*. Oxford: British Archaeological Reports International Series 91.
- Pare, C.F.E. 1999. Beiträge zum Übergang von der Bronzezeit zur Eisenzeit in Mitteleuropa. Teil II: Grundzüge der Chronologie in westlichen Mitteleuropa (11.–8. Jahrhundert v. Chr.), *Jahrbuch des Römisch-Germanischen Zentralmuseums Mainz* 46, 175–315.
- Peake, R. 2005. Marolles-sur-Seine, Le Grand Canton: organisation de l'espace et structures, in Buchsenschutz *et al.* 2005, 193–207.
- Peake, R., Allenet, G., Bernard, V., Chaussé, C. *et al.* 2005. Un exemple de gestion du milieu humide en fond alluvial à l'âge du Fer à Bazoches-lès-Bray (Seine-et-Marne), in Buchsenschutz *et al.* 2005, 157–179.
- Perrin, S. 2000. Basse-Ham "Parc Unicorn, Site 2", *Bilan Scientifique Lorraine 2000*, 69–70.
- Pichon, B. 2002. *Carte Archéologique de la Gaule: l'Aisne (02)*. Paris: Académie des Inscriptions et Belles Lettres.
- Pion, P. 1990. De la chefferie à l'état? Territoires et organisation sociale dans la vallée de l'Aisne aux âges des métaux (2200–20 av. J.-C.), in *Archéologie et Espaces (Xe Rencontres Internationales d'Archéologie et d'Histoire d'Antibes)*, 183–260. Juan-les-Pins: Éditions APDCA.
- Pion, P. and Piechaud, S. 1983. Le site du premier et du deuxième âge du Fer de Berry-au-Bac "Le Vieux Tordoir", *Fouilles Protohistoriques de la Vallée de l'Aisne* 11, 205–225.
- Pommepuy, C. 1999. Le matériel de mouture de la vallée de l'Aisne de l'âge du Bronze à La Tène finale: formes et matériaux, *Revue Archéologique de Picardie* 1999 3/4, 115–141.
- Pommepuy, C. and Brun, P. 1982. Le site du premier âge du Fer de Bucy-le-Long "Le Grand Marais", *Fouilles Protohistoriques de la Vallée de l'Aisne* 10, 133–164.
- Pommepuy, C., Auxiette, G., Desenne, S., Gransar, F. and Hénou, B. 2000. Des enclos à l'âge du Fer dans la vallée de l'Aisne: le monde des vivants et le monde des morts, *Revue Archéologique de Picardie* 2000 1/2, 197–216.
- Prilau, G. 2000. Une ferme gauloise spécialisée dans le travail du sel à Pont-Rémy "La Queue" et "Le Fond de Baraquin" (Somme). Évolution et particularités de l'espace enclos, *Revue Archéologique de Picardie* 2000 1/2, 233–254.
- Prilau, G. 2002. Saint-Laurent-Blangy "Zone Industrielle d'Actiparc", *Bilan Scientifique Nord-Pas-de-Calais 2002*, 126–131.
- Prost, D. 1999. Bernières-sur-Seine "La Banque" et "Les Fondriaux", *Bilan Scientifique Haute-Normandie 1999*, 19–21.
- Provost, M. and Mourot, F. 2002. *Carte Archéologique de la Gaule: La Meuse (55)*. Paris: Académie des Inscriptions et Belles Lettres.

- Rougier, R. 2000. Les formes d'occupation du territoire à l'âge du Fer en Pays de Caux (Seine-Maritime) d'après les fouilles sur le tracé de l'autoroute A29, in Marion and Blancquaert 2000, 411–426.
- Rougier, R., Watel, F. and Blondiaux, J. 2004. Deux inhumations en silo sur le tracé de l'autoroute A29 à Fresnes-Mazancourt and Framerville-Rainecourt (Somme), *Revue Archéologique de Picardie* 2004 3/4, 67–76.
- Rowlett, R.M., Rowlett E.S.-J., and Boureux, M. 1969. A rectangular early La Tène Marnian house at Chassemy (Aisne), *World Archaeology* 1, 106–254.
- Scapula, J. 1975. *Un haut-lieu archéologique de la haute vallée de la Seine: la Butte d'Isle-Aumont en Champagne*. Troyes: Patton.
- Séguier, J.-M. and Delattre, V. 2005. Espaces funéraires et cultuels au confluent Seine-Yonne (Seine-et-Marne) de la fin du Vème au IIIème s. av. J.-C., in Buchsenschutz *et al.* 2005, 241–260.
- Schindler, R. 1969. Die Aleburg bei Befort in Luxemburg, *Hémecht* 21, 37–50.
- Schindler, R. 1977. *Die Altburg von Bundenbach. Eine befestigte Höhensiedlung des 2/1 Jahrhunderts v. Chr. im Hunsrück*. Mainz: Trierer Grabungen und Forschungen 10.
- Stead, I.M. and Rigby, V. 1999. *The Morel Collection: Iron Age Antiquities from Champagne in the British Museum*. London: British Museum Press.
- Talon, M. 1987. Les formes céramiques bronze final et premier âge du Fer de l'habitat de Choisy-au-Bac (Oise), in *Les relations entre le continent et les îles Britanniques à l'âge du Bronze (Actes du colloque de Lille)*, 255–273. Amiens: Supplément à Revue Archéologique de Picardie.
- Talon, M. 1989. Les tendances évolutives des formes céramiques du premier âge du fer dans la vallée de l'Oise (France), in Ulrix-Closset and Otte 1989, 307–320.
- Talon, M. 1991a. L'occupation Bronze final du site de Chevrières, in *Archéologie de la Vallée de l' Oise*, 82–84. Compiègne: CRAVO.
- Talon, M. 1991b. L'éperon barré du "Camp César" à Catenoy à l'âge du Bronze final, in *Archéologie de la Vallée de l' Oise*, 84–86. Compiègne: CRAVO.
- Talon, M. 1991c. Les habitats du Bronze final et premier âge du Fer à Choisy-au-Bac, "Le Confluent", in *Archéologie de la Vallée de l' Oise*, 89–98. Compiègne: CRAVO.
- Talon, M. 1992. Un site d'habitat de l'âge du Bronze final à Feuillères (Somme), in *Habitats et nécropoles à l'âge du Bronze sur le Transmanche et le TGV Nord*, 155–173. Paris: Société Préhistorique Française Travaux 1 (Bulletin de la Société Préhistorique Française 89).
- Talon, M. 2005. La fosse 190 du "Parc Scientifique" de La Croix-Saint-Ouen (Oise). Contribution à l'étude du Hallstatt final dans la moyenne vallée

- de l'Oise, in Auxiette and Malrain 2005, 183–192.
- Talon, M. and Billand, G. 1993. La Croix-Saint-Ouen “Les Longues Rayes”, *Bilan Scientifique Picardie* 1993, 92–93.
- Tappret, E. 1993. Rosnay-l'Hôpital “La Remise”, *Bilan Scientifique Champagne-Ardenne* 1993, 27–28.
- Thierot, F. 2000. Metz-Borny ZAC “Sébastopol, secteurs 1, 2 et 3”, *Bilan Scientifique Lorraine* 2000, 89–90.
- Tikonoff, N. and Deffressigne-Tikonoff, S. 2003. Première approche de la céramique du site fortifié de hauteur de la cité d’Affrique à Messein (Meurthe-et-Moselle), *Archaeologia Mosellana* 5, 239–269.
- Ulrix-Closset, M. and Otte, M. 1989. *La civilisation de Hallstatt. Bilan d'une rencontre, Liège 1987*, Liège: Études et recherches archéologiques de l'Université de Liège 36.
- Valentin, B., Bernard, V., Gaudefroy, S. and Pastre, J.-F. 1990. Le site Laténien des Esquillons et des Trentes Arpents à Houdancourt (Oise). Fouilles de 1989, in B. Valentin and F. Prodéo (eds), *Fouilles dans les sablières de la moyenne vallée de l'Oise en 1989*, 25–55. Amiens: Revue Archéologique de Picardie Numéro Spécial 8.
- Van Doorselaer, A. 1989. Un site fortifié de âge du Fer avec enclos cultuel à Kooigem, commune de Courtrai (Flandre Occidentale), in Ulrix-Closset and Otte 1989, 357–366.
- Van Doorselaer, A., Putman, R., Van der Gucht, K. and Jannsens, F. 1987. *De Kemmelberg, een Keltische Bergvesting*. Courtrai: Westvlaamse Archaeologica Monograph 3.
- Verbrugghe, G. 1991. Bussy-Lettrée “Le Mont des Maisses”, *Bilan Scientifique Champagne-Ardenne* 1991, 72.
- Verbrugghe, G. 2004. Nouvelles “unités d’exploitation” agricoles de la transition du premier au second âge du fer sur le terroir de Longchamp (Perthes, Haute-Marne), *Bulletin de l'Association Française pour l'Étude de l'Âge du Fer* 22, 31–32.
- Verbrugghe, G., Villes, A. and Munaut, A.-V. 1997. Un habitat rural de la fin de âge du Bronze (Bronze Final III): Les Marsillers à Bézannes (Marne), *Bulletin de la Société Archéologique Champenoise* 90, 31–80.
- Villes, A. 1981. Les bâtiments domestiques Hallstattiens de La Chaussée-sur-Marne et le problème de la maison à l'âge du fer en France septentrionale, in *L'Âge du Fer en France septentrionale*, 49–97. Reims: Mémoire de la Société Archéologique Champenoise 2.
- Villes, A. 1991. Saint-Gibrien “Dessus du Vieux Pont”, *Bilan Scientifique Champagne-Ardenne* 1991, 85–92.
- Villes, A. 1999. Entre principautés et chefferies, citadelles et fermes, le Hallstatt final en Champagne et Bourgogne: données nouvelles, in Villes and Bataille-Melkon 1999, 11–92.

- Villes, A. and Bataille-Melkon, A. (eds) 1999. *Fastes des Celtes entre Champagne et Bourgogne aux VIIe-IIIe siècles avant notre ère*. Reims: Mémoire de la Société Archéologique Champenoise 15.
- Violot, J.-M. 2000. Bussy-Lettrée “Le Petit Vau Boudin”, *Bilan Scientifique Champagne-Ardenne 2000*, 84–86.

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